

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CALLAWAY GOLF COMPANY,)	
)	C.A. No. 06-91-SLR
Plaintiff,)	
)	
v.)	PUBLIC VERSION
)	
ACUSHNET COMPANY,)	
)	
Defendant.)	

**COMPENDIUM OF EXHIBITS IN SUPPORT OF ACUSHNET'S BRIEF
IN OPPOSITION TO CALLAWAY GOLF'S MOTION
FOR PERMANENT INJUNCTION**

VOLUME 2 OF 5

EXHIBITS 16 TO 17

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Dated: February 25, 2008
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[REDACTED]	[REDACTED]	19
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<u>DESCRIPTION</u>	<u>TITLE</u>	<u>EX.</u>
[REDACTED]	[REDACTED]	36
[REDACTED]	[REDACTED]	37
[REDACTED]	[REDACTED]	38
[REDACTED]	[REDACTED]	39
[REDACTED]	[REDACTED]	40

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CERTIFICATE OF SERVICE

I, David E. Moore, hereby certify that on March 3, 2008, the attached document was electronically filed with the Clerk of the Court using CM/ECF which will send notification to the registered attorney(s) of record that the document has been filed and is available for viewing and downloading.

I further certify that on March 3, 2008, the attached document was Electronically Mailed to the following person(s):

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EXHIBIT 16



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ALEXANDRIA, VA 22313-1450
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CONTROL NO.	FILING DATE	PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
95/000,120	01/17/06	6,210,293	

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EXAMINER

GELLNER, J.

ART UNIT

PAPER

3993

DATE MAILED:

01/23/08

INTER PARTES REEXAMINATION COMMUNICATION

BELOW/ATTACHED YOU WILL FIND A COMMUNICATION FROM THE UNITED STATES PATENT AND TRADEMARK OFFICE OFFICIAL(S) IN CHARGE OF THE PRESENT REEXAMINATION PROCEEDING.

All correspondence relating to this *inter partes* reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this communication.



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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

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**Transmittal of Communication to Third Party Requester
Inter Partes Reexamination**

REEXAMINATION CONTROL NUMBER 95/000,120.

PATENT NUMBER 6,210,293.

TECHNOLOGY CENTER 3999.

ART UNIT 3993.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above-identified reexamination proceeding. 37 CFR 1.903.

Prior to the filing of a Notice of Appeal, each time the patent owner responds to this communication, the third party requester of the *inter partes* reexamination may once file written comments within a period of 30 days from the date of service of the patent owner's response. This 30-day time period is statutory (35 U.S.C. 314(b)(2)), and, as such, it cannot be extended. See also 37 CFR 1.947.

If an *ex parte* reexamination has been merged with the *inter partes* reexamination, no responsive submission by any *ex parte* third party requester is permitted.

All correspondence relating to this *inter partes* reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

OFFICE ACTION IN INTER PARTES REEXAMINATION	Control No.	Patent Under Reexamination	
	95/000,120	6210293	
	Examiner	Art Unit	
	Jeffrey L. Gellner	3993	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

Responsive to the communication(s) filed by:

Patent Owner on 30 April 2007

Third Party(ies) on 29 May 2007

RESPONSE TIMES ARE SET TO EXPIRE AS FOLLOWS:

For Patent Owner's Response:

2 MONTH(S) from the mailing date of this action. 37 CFR 1.945. EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.956.

For Third Party Requester's Comments on the Patent Owner Response:

30 DAYS from the date of service of any patent owner's response. 37 CFR 1.947. NO EXTENSIONS OF TIME ARE PERMITTED. 35 U.S.C. 314(b)(2).

All correspondence relating to this inter partes reexamination proceeding should be directed to the Central Reexamination Unit at the mail, FAX, or hand-carry addresses given at the end of this Office action.

This action is not an Action Closing Prosecution under 37 CFR 1.949, nor is it a Right of Appeal Notice under 37 CFR 1.953.

PART I. THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892
2. ☒ Information Disclosure Citation, PTO/SB/08
3. ☐ _____

PART II. SUMMARY OF ACTION:

- 1a. ☒ Claims 1-8 are subject to reexamination.
- 1b. ☐ Claims _____ are not subject to reexamination.
2. ☐ Claims _____ have been canceled.
3. ☐ Claims _____ are confirmed. [Unamended patent claims]
4. ☐ Claims _____ are patentable. [Amended or new claims]
5. ☒ Claims 1-8 are rejected.
6. ☐ Claims _____ are objected to.
7. ☐ The drawings filed on _____ ☐ are acceptable ☐ are not acceptable.
8. ☐ The drawing correction request filed on _____ is: ☐ approved. ☐ disapproved.
9. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119 (a)-(d). The certified copy has:
☐ been received. ☐ not been received. ☐ been filed in Application/Control No 95000120.
10. ☐ Other _____

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DETAILED ACTION

This 2nd Action Non-Final is in response to the Patent Owner's response received 30 April 2007 and the Third Party Requester's response received 29 May 2007. The action is non-final and not an action closing prosecution because, upon review of the arguments presented by the Third Party Requester, Examiner has newly adopted in this office action Grounds 1, 8, 15, 22, 29, 36, 43, and 50 of rejection.

IDS

The IDS received 5 Nov. 2007 is acknowledged. A signed 1449 accompanies this office action. The second page of the 1449 was not found in the image file wrapper (IFW). Also, the marked through entries, or documents, could not be found by the Examiner in the (IFW) or artifact folder. The Patent Owner should review the IFW to ensure that the entries are properly presented.

Statutory Basis for Grounds of Rejections - 35 USC § 102 and 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Third Party Requester's Grounds of Rejections

Re. Claim 1

Ground #1. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

Ground #2. In the alternative to Ground #1, the requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637, (Molitor '637).

Ground #3. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673, (Wu).

Ground #4. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751, (Molitor '751).

Ground #5. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #6. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #7. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 2

Ground #8. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193.

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Ground #9. In the alternative to Ground #8, the requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #10. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #11. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Ground #12. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #13. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #14. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 3

Ground #15. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193.

Ground #16. In the alternative to Ground #15, the requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #17. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673.

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Ground #18. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Ground #19. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #20. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #21. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 4

Ground #22. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193.

Ground #23. In the alternative to Ground #22, the requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #24. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #25. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Ground #26. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,274,637.

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Ground #27. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #28. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 5

Ground #29. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193.

Ground #30. In the alternative to Ground #29, the requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #31. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #32. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Ground #33. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #34. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #35. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

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Re. Claim 6

Ground #36. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193.

Ground #37. In the alternative to Ground #36, the requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #38. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #39. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Ground #40. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #41. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #42. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 7

Ground #43. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

Ground #44. In the alternative to Ground #43, the requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637, (Molitor '637).

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Ground #45. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673, (Wu).

Ground #46. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751, (Molitor '751).

Ground #47. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #48. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #49. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 8

Ground #50. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

Ground #51. In the alternative to Ground #50, the requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637, (Molitor '637).

Ground #52. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673, (Wu).

Ground #53. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751, (Molitor '751).

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Ground #54. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #55. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #56. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Summary of Grounds Adopted vel non

In sum, Proposed Grounds 1-18, 22-39, 43-56 are **Adopted** by the Examiner.

In sum, Proposed Grounds 19-21 and 40-42 are **Not Adopted** by the Examiner.

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Summary of the Grounds of Rejections

Claims 1-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (incorporating by reference Molitor et al., U.S. Pat. No. 4,274,637).

Claims 1-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt, U.S. Pat. No. 4,431,193 in view of Molitor et al., U.S. Pat. No. 4,274,637.

Claims 1-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt, U.S. Pat. No. 4,431,193 mentioning Molitor et al., U.S. Pat. No. 4,274,637 in view of Wu, U.S. Pat. No. 5,334,673, as evidenced by Exhibit C.

Claims 1-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt, U.S. Pat. No. 4,431,193 mentioning Molitor et al., U.S. Pat. No. 4,274,637 in view of Molitor et al., U.S. Pat. No. 4,674,751.

Claims 1, 2, 4, 5, 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit, U.S. Pat. No. 5,314,187 in view of Molitor et al., U.S. Pat. No. 4,274,637.

Claims 1, 2, 4, 5, 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit, U.S. Pat. No. 5,314,187 in view of Wu, U.S. Pat. No. 5,334,673.

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Claims 1, 2, 4, 5, 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit, U.S. Pat. No. 5,314,187 in view of Molitor et al., U.S. Pat. No. 4,674,751.

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Proposed Third Party Requester's Rejections

Issue of Inherency

Multiple proposed rejections that the third party requester submits are based on the inherent properties of the materials. In order to prove the inherent properties of these materials the requester has provided "product data sheets" for the following materials: SURLYN (Exhibit I) and ESTANE (Exhibit J). These "product data sheets" have publication dates later than the critical date of the claimed inventions. Also, the third party requester has provided other Exhibits to prove or evidence inherency, e.g. Exhibit C (description of a golf product performance characteristics); Exhibits G and L (patent owners admissions)

MPEP § 2124 lists exceptions to the rule that the publication date must precede the critical data of the claimed invention: "...facts [that] include the characteristics and properties of a material...". The Shore D hardness and flexural modulus are characteristics and properties of a material. Thus, it is appropriate to use these "product data sheets" to show such a universal fact as the inherent properties of a known material. Moreover, See also MPEP § 2112.01: "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977)." And, "Products of identical chemical composition can not have mutually exclusive properties." "A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)."

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Re. Claim 1

Proposed Third Party Requester Rejection: Ground #1.

The requester submits on pages 14-17 that claim 1 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

In the request on pages 14 through 17 the third party requester proposes that claim 1 be rejected based upon Nesbitt alone with the incorporation by reference of Molitor '637. The third party requester points out that Molitor '637 is incorporated by reference into Nesbitt because Nesbitt refers to Molitor '637. (See Nesbitt col. 3, ll. 54-60).

This rejection is adopted in this office action.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 1	Nesbitt (primary) with (Molitor '637 incorporated by reference)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer having	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).
a Shore D hardness of 60 or more molded on said core,	<u>Nesbitt</u> : "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® -- marketed by E.I DuPont de Nemours." (Nesbitt, col. 2; lines 36-38.)

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	<p><u>Per the '293 Patent</u>: "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('293 patent, col. 2, lines 54-55.)</p> <p><u>Exhibit I</u>: DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.</p>
said inner cover layer having a thickness of 0.100 to 0.010 inches,	<p>"It is found that the inner layer of hard, high flexural modulus resinous material such as SURLYN resin type 1605, is preferably of a thickness in the range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, ll. 19-23).</p>
said inner cover layer comprising a blend of two or more low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p> <p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
an outer cover layer having	<p>"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)</p>
a Shore D hardness of 64 or less molded on said inner cover layer,	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See below for Shore D hardness of 64 or less limitation explanation.</p>

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said outer cover layer having a thickness of 0.010 to 0.070 inches, and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer comprising a relatively soft polyurethane material.	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

Nesbitt incorporating by reference Molitor '637 describe a number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50.

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Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt incorporating by reference Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. SURLYN 8940 has a Shore D harness value of 65 (from Exhibit I - Surlyn Product Information) while SURLYN 9650 has a Shore D harness value of 63 (from Exhibit I - Surlyn Product Information). Both of these values are greater than 60. Also, as mentioned above, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64. Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would

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find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

Also, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". **A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64.** Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Moreover, Molitor '637 teaches a list of materials that may adapted for use in the invention:

Homopolymeric and copolymeric substances, such as (1) vinyl resins formed by the polymerization of vinyl chloride or by the copolymerization of vinyl chloride with unsaturated polymerizable compounds, e.g., vinyl esters; (2) polyolefins such as polyethylene, polypropylene, polybutylene, transpolyisoprene, and the like, including copolymers of polyolefins; (3) polyurethanes such as are prepared from polyols and organic polyisocyanates; (4) polyamides such as polyhexamethylene; (5) polystyrene, high impact polystyrene, styrene acrylonitrile copolymer and ABS, which is acrylonitrile, butadiene styrene copolymer; (6) acrylic resins as exemplified by the copolymers of methylmethacrylate, acrylonitrile, and styrene, etc.; (7) thermoplastic rubbers such as the urethanes, copolymers of ethylene and propylene, and transpolyisoprene, block copolymers of styrene and cispolybutadiene, etc.; and (8) polyphenylene oxide resins, or a blend with high impact polystyrene known by the trade name "Noryl."

See Molitor '637, col. 5, ll. 33-50.

As the request recognizes on page 17:

Moreover, as recognized by the inventor himself, the particular materials used in the golf balls were not as important as the mechanical properties of those layers. (See Exhibit G at 334.) Furthermore, the relatively soft polyurethane material taught by

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Molitor '637 and the relatively soft ionomer inner cover layer taught by Nesbitt have similar mechanical properties including an identical Shore D hardness of 55 and a similar, relatively low flexural modulus of 25,000 and 14,000 psi, respectively. (Compare Exhibit I with Exhibit J.) This would have further suggested to those skilled in the art that the soft polymeric materials taught by Molitor, including, for example, the relatively soft polyurethane material would have been substitutable for the soft ionomer outer cover layer in one example taught by Nesbitt.

In addition, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334.

This rejection of claim 1 based on Nesbitt incorporating by reference Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 1: Patent Owner's Argument

Patent Owner does not argue this rejection.

Ground 1: Third Party Requester's Comments

Third Party Requester argues that the language of Nesbitt at col. 3, lines 56-61, was a proper incorporation by reference of Molitor '637. In the 1st Office Action the Examiner stated that the language of Nesbitt was not proper incorporation of reference because the perfecting root words of "incorporate" and "reference" were not in the reference statement (1st Office Action

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pages 10-11). Third Party Requester's rebuttal is that the standard used by the Examiner was not the standard for incorporation by reference during prosecution of the Nesbitt patent (Third Party Requester's Comments at pages 3-5). The Third Party Requester bolsters this argument by citing several court decisions (Third Party Requester's Comments at pages 5-6).

Ground 1: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. The language of incorporation used in Nesbitt is found at col. 3, lines 54-61, and states that "Polymeric materials are preferably such as ionomer resins which are foamable. **Reference is made** to the application Ser. No. 15,658, of Robert P. Molitor issued into U.S. Patent No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers . . . " (emphasis added).

The pertinent language of incorporation by reference quoted in *In re Hughes* is found at 550 F.2d 1275 and states that "**Reference is made** to application Ser. No. 131,108 for complete description of methods of preparing aqueous polymeric dispersions applicable in the hereinafter described invention" (emphasis added). This language was held to incorporate '108.

The pertinent language of incorporation by reference quoted in *In re Voss* is found at 557 F.2d 816 and states that "**Reference is made** to United States Patent No. 2,920,971, granted to S.D. Stookey '971, for a general discussion of glass-ceramic materials and their production" (emphasis added). This language was held to incorporate '971.

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Since the language in Nesbitt for incorporation by reference is virtually identical to the language used in *In re Hughes* and *In re Voss*, the Examiner concludes that Nesbitt incorporates by reference Molitor '637.

Proposed Third Party Requester Rejection: Ground #2.

In the alternative, the requester submits on pages 14-17 that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 1	Nesbitt (primary) with Molitor '637 (teaching)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer having	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).
a Shore D hardness of 60 or more molded on said core,	<u>Nesbitt</u> : "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)

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	<p><u>Per the '293 Patent:</u> "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('293 patent, col. 2, lines 54-55.)</p> <p><u>Exhibit I:</u> DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.</p>
said inner cover layer having a thickness of 0.100 to 0.010 inches,	"It is found that the inner layer of hard, high flexural modulus resinous material such as SURLYN resin type 1605, is preferably of a thickness in the range of 0.020 inches and 0.070 inches. " (Nesbitt, col. 3, ll. 19-23).
said inner cover layer comprising a blend of two or more low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p> <p><u>Molitor '637:</u> Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
an outer cover layer having	"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)
a Shore D hardness of 64 or less molded on said inner cover layer,	<p><u>Nesbitt:</u> "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637:</u> In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See below for Shore D hardness of 64 or less limitation explanation.</p>

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said outer cover layer having a thickness of 0.010 to 0.070 inches, and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer comprising a relatively soft polyurethane material.	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

As mentioned above, Nesbitt references Molitor '637 as describing an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873

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Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. SURLYN 8940 has a Shore D harness value of 65 (from Exhibit I - Surlyn Product Information) while SURLYN 9650 has a Shore D harness value of 63 (from Exhibit I - Surlyn Product Information). Both of these values are greater than 60. Also, as mentioned above, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64. Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would

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find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

Also, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". **A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64.** Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Moreover, Molitor '637 teaches a list of materials that may adapted for use in the invention:

Homopolymeric and copolymeric substances, such as (1) vinyl resins formed by the polymerization of vinyl chloride or by the copolymerization of vinyl chloride with unsaturated polymerizable compounds, e.g., vinyl esters; (2) polyolefins such as polyethylene, polypropylene, polybutylene, transpolyisoprene, and the like, including copolymers of polyolefins; (3) polyurethanes such as are prepared from polyols and organic polyisocyanates; (4) polyamides such as polyhexamethylene; (5) polystyrene, high impact polystyrene, styrene acrylonitrile copolymer and ABS, which is acrylonitrile, butadiene styrene copolymer; (6) acrylic resins as exemplified by the copolymers of methylmethacrylate, acrylonitrile, and styrene, etc.; (7) thermoplastic rubbers such as the urethanes, copolymers of ethylene and propylene, and transpolyisoprene, block copolymers of styrene and cispolybutadiene, etc.; and (8) polyphenylene oxide resins, or a blend with high impact polystyrene known by the trade name "Noryl."

See Molitor '637, col. 5, ll. 33-50.

As the request recognizes on page 17:

Moreover, as recognized by the inventor himself, the particular materials used in the golf balls were not as important as the mechanical properties of those layers. (See Exhibit G at 334.) Furthermore, the relatively soft polyurethane material taught by

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Molitor '637 and the relatively soft ionomer inner cover layer taught by Nesbitt have similar mechanical properties including an identical Shore D hardness of 55 and a similar, relatively low flexural modulus of 25,000 and 14,000 psi, respectively. (Compare Exhibit I with Exhibit J.) This would have further suggested to those skilled in the art that the soft polymeric materials taught by Molitor, including, for example, the relatively soft polyurethane material would have been substitutable for the soft ionomer outer cover layer in one example taught by Nesbitt.

In addition, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334.

Thus, because it appears that to one of ordinary skill in the art at the time the invention was created that the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 1 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 2: Patent Owner's Argument

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Patent Owner argues that the combination of Nesbitt and Molitor '637 is improper because: (1) Nesbitt's entire focus is on golf balls with all-ionomer resins, preferably foamable, two-layer covers and references Molitor '637 for examples of foamable ionomer resins. Hence, Nesbitt teaches away from the disclosure of Molitor '637's disclosure of non-ionomeric resins, including polyurethane (Patent Owner's Response at pages 15-16); (2) in a deposition (Exhibit F) Nesbitt, himself, stated that he did not consider use of polyurethane as an outer cover material (Patent Owner's Response at middle of page 16); (3) Nesbitt combined with Molitor '637 is improper because their individually disclosed thicknesses for the outer layer are divergent (Patent Owner's Response at page 17; (4) neither reference discloses a Shore D hardness of 64 or less for the outer layer measured on the ball with the Examiner relying on commercial literature of ESTANE polyurethane (Exhibit J) for a hardness value. This value is not probative because hardness values of the same material will differ depending upon the total construction of the ball (Patent Owner's Response at middle of page 18); (5) one of ordinary skill did not know at the time of the claimed invention to use a thin, polyurethane cover layer have a Shore hardness of 64 or less on the ball before the patent at issue taught this construction (Patent Owner's Response at top of page 16); and, (6) the combination impermissibly uses hindsight construction by scouring the prior art to locate individual claim elements (Patent Owner's Response at middle of page 19).

Ground 2: Third Party Requester's Comments

As to the Patent Owner's first argument, the Third Party Requester states that the plain language of Nesbitt is that the outer or inner cover layers can be of a synthetic polymeric

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material and that Molitor '637 gives examples of synthetic polymeric materials, including polyurethane (Third Party Requester's Comments at page 19 to top of page 20).

As to the Patent Owner's second argument, the Third Party Requester states that the Fed. Cir. takes a dim view of testimony for a patent's meaning from inventors after the fact citing *Bell & Howell Document Mgmt. Prods. Co. v Altek Sys.* (Third Party Requester's Comments at page 20).

As to the Patent Owner's third argument, the Third Party Requester states that the range of thicknesses in the two patents overlay and disclose in part the same ranges, and, hence a person of ordinary skill would find it obvious to substitute one layer material for another (Third Party Requester's Comments at bottom of page 20 to top of page 21).

As to the Patent Owner's fourth argument, the Third Party Requester states that an expert in the art produced a three-piece ball with the core and inner layer of Nesbitt and the cover of Molitor '637. The ball exhibited Shore hardness values within those of the claimed values (Third Party Requester's Comments at page 21).

As to the Patent Owner's fifth argument, the Third Party Requester states that golf balls with a core and inner and outer layers were known before the filing of the '873 patent (Third Party Requester's Comments at page 17 to page 19). Further, polyurethane has been used in golf ball covers before the filing of the '873 patent (Third Party Requester's Comments at page 17 to page 19).

As to the Patent Owner's sixth argument, the Third Party Requester states that the combination of a ball with the core and inner layer of Nesbitt with an outer polyurethane layer is proper in light of the decisions in *Ex parte Sullivan* and *KSR v. Teleflex* (Third Party Requester's

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Comments at page 14 to page 16). In *Sullivan* a split panel of the BPAI held that “[i]n applying the test for obviousness, we conclude that the teaching of WU clearly would have made it obvious at the time of the invention was made to a person of ordinary skill in the art to have modified Nesbitt’s golf ball by using polyurethane as the outer cover material to achieve the expected benefits therefrom taught by Wu (i.e., to have the “click” and “feel” of balata, improved shear resistance and cut resistance; durability; and resiliency).” (Third Party Requester’s Comments at middle of page 14). In *KSR* a unanimous Court held that “[c]ommon sense teaches . . . that . . . in many cases, a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” (Third Party Requester’s Comments at top of page 16).

Ground 2: Examiner’s Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester and the rejection of claim 1 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor ‘637 is maintained. Although Nesbitt’s emphasis (in his patent and deposition) may be on all-ionomer resins, it is settled law that a patent teaches all that it discloses including nonpreferred embodiments (MPEP 2123(I)). Since Nesbitt references the Molitor ‘637 patent, one of ordinary skill would logically look at its complete disclosure which includes the use of polyurethane as an outer cover. The combination is proper because, in addition to the holdings quoted by the Third Party Requester in their comments, the Supreme Court has held that “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical

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grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion of *KSR* at middle of page 17). Here, the problem of producing a golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at bottom of page 4). Polyurethane was a known solution for providing "click" and feel (Third Party Requester's Comments *id.*). The resulting golf ball with a polyurethane outer cover layer had the expected results (*Sullivan* at page 11). Thus, the golf balls of claim 1 are of ordinary skill and common sense.

Proposed Third Party Requester Rejection: Ground #3.

The requester submits on pages 18-20 of the request that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Wu discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 1	Nesbitt (primary) mentioning Molitor '637 with Wu (teaching)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)

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a core,	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer having	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).
a Shore D hardness of 60 or more molded on said core,	<u>Nesbitt</u> : "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.) <u>Per the '293 Patent</u> : "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('293 patent, col. 2, lines 54-55.) <u>Exhibit I</u> : DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.
said inner cover layer having a thickness of 0.100 to 0.010 inches,	"It is found that the inner layer of hard, high flexural modulus resinous material such as SURLYN resin type 1605, is preferably of a thickness in the range of 0.020 inches and 0.070 inches. " (Nesbitt, col. 3, ll. 19-23).
said inner cover layer comprising a blend of two or more low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60). <u>Molitor '637</u> : Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).
an outer cover layer having	"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14..." (Nesbitt, col. 2, ll. 43-47.)
a Shore D hardness of 64 or less molded on said inner cover	<u>Nesbitt</u> : "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which

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layer,	<p>describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p><u>Wu</u>: "Preferably, a golf ball is made in accordance with the present invention by molding a cover about a core wherein the cover is formed from a polyurethane composition comprising a polyurethane prepolymer and a slow-reacting polyamine curing agent or a difunctional glycol." (Wu, col. 3, ll. 62-66).</p> <p><u>Wu</u>: "With polyurethanes made in accordance with the present invention, the degree of cure which has taken place is dependent upon, inter alia, the time, temperature, type of curative, and amount of catalyst used. It has been found that the degree of cure of the cover composition is directly proportional to the hardness of the composition. A hardness of about 10D to 30D, Shore D hardness for the cover stock at the end of the intermediate curing step (i.e. just prior to the final molding step) has been found to be suitable for the present invention. More preferred is a hardness of about 12D to 20D." (Wu, col. 6, ll. 27-38).</p> <p>See also below for Shore D hardness of 64 or less limitation explanation.</p>
said outer cover layer having a thickness of 0.010 to 0.070 inches, and	<p>"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)</p>
said outer cover layer comprising a relatively soft polyurethane material.	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p>

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	<p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p> <p><u>Wu</u>: "[t]he present invention is a golf ball product made from a polyurethane prepolymer cured with a slow-reacting curing agent selected from the group of slow-reacting polyamine curing agents or difunctional glycols. The term "golf ball product" as used in the specification and claims means a cover, a core, a center or a one-piece golf ball. The cover of a golf ball made in accordance with the present invention has been found to have good shear resistance, cut resistance, durability and resiliency. Preferably, the polyurethane composition of the present invention is used to make the cover of a golf ball." (Wu, col. 2, ll. 33-44).</p>
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As mentioned above, Nesbitt mentioning Molitor '637 teaches the use of particular polyurethane materials for the use as an outer layer. Wu teaches that polyurethane was being used as the outer layer of golf ball *circa* 1993. Wu further teaches in col. 1:36-46 that SURLYN covered golf balls lack the "click" and "feel" of balata which golfers have become accustomed to such sensations and polyurethane covered golf balls can be made to have a similar "click" and "feel" of balata. Wu also at least teaches that polyurethanes made according to its invention will have Shore D hardness directly proportional to the degree of cure of the cover, and this Shore D hardness ranges from 10 to 30, preferably 12 to 20 on the Shore D scale, see col. 6:26-38. This teaching of Shore D hardness is directed to an intermediate curing step product prior to the final molding process to finish the golf ball. Exhibit C demonstrates the actual finished golf ball product having the cover layer that Wu teaches within its disclosure. Exhibit C teaches that the

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golf ball taught therein is covered by the following patents: 4,783,078; 4,846,910; 4,858,923; 4,904,320; 4,915,390; 5,007,594; 5,080,367; 5,133,509; **5,334,673**; and D339,074. The '673 Patent teaches the cover sock of the Exhibit C finished golf ball. Exhibit C teaches that the golf ball taught therein has a cover material made from an "elastomer", having a thickness of .050", and 58 Shore D hardness. All three properties are within the range of mechanical properties of the claim invention (polyurethane is an elastomer, cover layer thickness ranges from 0.010 to 0.070 inches and the Shore D hardness is less than 64). Because it has been admitted by the inventor of the Sullivan '893 patent that the particular chemical properties of the materials (the chemical composition) used in the construction of a golf ball lack criticality as compared to the mechanical properties (the Shore D hardness, flexural modulus, layer thickness) of those compounds used for constructing the different layers (Exhibit G at 334), one of ordinary skill in the art at the time the invention was made would find it obvious to incorporate the teachings of Wu which inherently include the teachings of Shore hardness for the fully cured cover layer as taught in Exhibit C as obvious equivalent materials in order to achieve the same end result of providing a cover layer that has the same "click" and "feel" of a balata cover which the extra durability of an elastomeric material.

This rejection of claim 1 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 3: Patent Owner's Argument

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Patent Owner argues that the combination of Nesbitt and Wu is improper because: (1) the Wu patent is silent on the thickness of the polyurethane layer (Patent Owner's Response at page 20); (2) the Wu patent is silent on the Shore hardness value and in a deposition Ms. Wu said she could not predict what the hardness would be of a finished golf ball (Patent Owner's Response at page 20); (3) the Titleist 1 ball, which Examiner uses to disclose the proper hardness of the outer layer, or cover, because the ball's commercial literature lists the Wu patent, is not competent evidence because Wu's patent's claims are silent as to hardness (Patent Owner's Response at bottom of page 20 to top of page 21); (4) the claimed invention is the synergistic combination of features and the Examiner impermissibly uses hindsight to reassemble the ball (Patent Owner's Response at page 21); and, (5) the BPAI's divided opinion (the decision in *Ex parte Sullivan*) is not binding and the claim here is more narrow (Patent Owner's Response at page 21).

Ground 3: Third Party Requester's Comments

As to the Patent Owner's second argument, the Third Party Requester states that Nesbitt discloses the claimed Shore D hardness value at col. 2, lines 43-49, when used with and the Surlyn Data Sheet (Third Party Requester's Comments at page 23 and footnote 65).

As to the Patent Owner's fourth argument, the Third Party Requester states that motivation to make this combination is found as stated in the opinion of *ex parte Sullivan* (Third Party Requester's Comments at middle of page 22).

As to the Patent Owner's fifth argument, the Third Party Requester states that the opinion in *Ex parte Sullivan* sets forth cogent reasoning for the combination and the differences is scope

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between the claims are either explicit disclosed or inherent to Nesbitt or Wu, or mere design choice (Third Party Requester's Comments at pages 22-24).

Ground 3: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester and the rejection of claim 1 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. As to the Patent Owner's first and second arguments, Nesbitt discloses an overlapping thickness range for the outer cover of 0.020 inches to 0.100 inches (col. 3, lines 22-25) and its Shore hardness value of 55 ("Surlyn 1855" of col. 3, lines 22-25, which has a Shore D hardness of 55 (from Surlyn data sheet for Surlyn 9020)) which is less than the claimed value of 64.

As to the Patent Owner's third argument, Examiner considers the Wu patent to describe the Titleist cover because the patent and the Titleist's commercial literature have characteristics in common such as being "cut-resistant" (Wu patent at col. 2 line 41; Titleist 1's commercial literature at text above "Titleist Professional Specifications") and ball velocities of 253.0 ft./sec. (Wu patent at col. 8 Table IV; Titleist 1's commercial literature at "Titleist Professional Specifications"). These two characteristics combined with the fact that the Titleist 1 cites the Wu patent leads to the conclusion that the cover of the Titleist 1 is within the ambit of the composition claimed in the Wu patent. Hence, the Titleist 1 commercial literature accurately recites other characteristics on which the Wu patent is silent, such as Shore D hardness. Whether Wu, herself, knew the hardness of an outer layer made of her composition is not dispositive because of the commercial literature for the Titleist 1.

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As to the Patent Owner's fourth and fifth arguments, the combination is proper because the Supreme Court has held that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within her or her grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion *KSR* at middle of page 17). Here, the problem of producing a golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at bottom of page 4). Polyurethane was a known solution for providing "click" and feel (Wu at col. 1 lines 40-46). Nesbitt discloses that a golf ball with his inner and outer thicknesses have both distance feel (*generally* Nesbitt at col. 1, lines 65-78, continuing to col. 2, lines 1-9). The resulting two-layer golf ball with an outer polyurethane layer had the expected results (*Sullivan* at page 12) and not, therefore, synergistic. Thus, the golf balls disclosed by the combination of Nesbitt and Wu are of ordinary skill and common sense. Since this combination has the elements cited in claim 1 of *Sullivan* '293, the decision in *Ex parte Sullivan* is supportive but not dispositive or binding.

Proposed Third Party Requester Rejection: Ground #4.

The requester submits on pages 20-21 of the request that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

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Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 1	Nesbitt mentioning Molitor '637
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer having	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material..." (Nesbitt, col. 2, ll. 34-37).
a Shore D hardness of 60 or more molded on said core,	<u>Nesbitt</u> : "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.) <u>Per the '293 Patent</u> : "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('293 patent, col. 2, lines 54-55.) <u>Exhibit I</u> : DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.
said inner cover layer having a thickness of 0.100 to 0.010 inches,	"It is found that the inner layer of hard, high flexural modulus resinous material such as SURLYN resin type 1605, is preferably of a thickness in the range of 0.020 inches and 0.070 inches ." (Nesbitt, col. 3, ll. 19-23).
said inner cover layer comprising a blend of two or more low acid ionomer resins containing no more than 16%	"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of

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by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>this invention.” (Nesbitt, col. 3, ll. 54-60).</p> <p>Molitor ‘637: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor ‘637, col. 14, l. 22 to col. 16, l. 34).</p>
an outer cover layer having	<p>“An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ...” (Nesbitt, col. 2, ll. 43-47.)</p>
a Shore D hardness of 64 or less molded on said inner cover layer,	<p>Nesbitt: “Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention.” (Nesbitt, col. 3, ll. 54-60.)</p> <p>Molitor ‘637: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See below for Shore D hardness of 64 or less limitation explanation.</p>
said outer cover layer having a thickness of 0.010 to 0.070 inches, and	<p>“It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches.” (Nesbitt, col. 3, lines 19-23.)</p>
said outer cover layer comprising a relatively soft polyurethane material.	<p>Nesbitt: “Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention.” (Nesbitt, col. 3, ll. 54-60.)</p> <p>Molitor ‘637: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>Exhibit J: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a</p>

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non-ionomeric thermoplastic elastomer.
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As shown above in the claim chart, Nesbitt mentioning Molitor '673 suggests the use of a soft outer cover layer including a polyurethane material. In an analogous golf ball, Molitor '751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core **a cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76.** The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) **a thermoplastic urethane having a shore A hardness less than 95 and (2) an ionomer having a shore D hardness greater than 55.**

(Molitor '751, col. 2, ll.33-49 (emphasis added)).

Moreover, in explaining what constitutes a two-piece golf ball, Molitor '751 teaches that:

The phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, **but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls have non-wound cores.**

(Molitor '751, col. 3, ll. 7-12 (emphasis added)).

As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

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How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art "translates" a Shore C value to a Shore D value is by taking the known Shore hardness values with a given range, in this instance Shore C, for given materials, in this instance polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

As stated in the request on page 21

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft outer cover layer of Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by Molitor '751 to provide a golf ball that includes "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, ll. 61-68)

This rejection of claim 1 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

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Ground 4: Patent Owner's Argument

The Patent Owner argues that the rejection is improper because: (1) Molitor '751 describes the cover of his golf ball with hardness values in terms of Shore C, hence, one of ordinary skill would not look to combine this teaching with the patent of Nesbitt, with hardness values recorded in terms of Shore D, because the two hardness values, or scales, have no simple mathematical correlation (Patent Owner's Response at page 22); and, (2) no motivation to combine Nesbitt with Molitor '751 because the Molitor '751 ball's construction is a hard core with a soft cover, the cover having a thickness twice the thickness of the Sullivan '873 claims and an order of magnitude softer (Patent Owner's Response at page 23).

Ground 4: Third Party Requester's Comments

Third Party Requester counter argues that, for argument (1) hardness values of Shore C and Shore D are convertible as evidenced by, *inter alia*, the Sullivan '873 patent itself (Third Party Requester's Comments at pages 25-27). For argument (2), the Third Party Requester states that motivation to combine exists because, *inter alia*, Molitor '751, itself, states that its cover can be used with the three-piece, two-cover golf ball of Nesbitt (Third Party Requester's Comments at bottom of pages 27-28).

Ground 4: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester, and the rejection of claim 1 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. As to the Patent Owner's first argument, Examiner specifically agrees with the Third Party

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Requester's comments that a correlation, or conversion, exists between the two hardness scales, Shore C and Shore D, because Sullivan '873 give a conversion of the two scales at col. 3, lines 42-43. Further, the quote used by the Patent Owner from the ASTM D-2240 standard stating that "'no simple relationship exists'" (Patent Owner's Response at middle of page 23) does not preclude a conversion factor, even if complex. Since the Supreme Court has recently held that "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton," even a complex calculation suffices to permit conversion of the two scales (slip opinion of *KSR* at middle of page 17). Hence, one of ordinary skill would not be deterred from use of prior art regardless of the hardness scale used to define its various layers.

As to the second argument, Examiner considers the language of the Molitor '751 that "[t]he phrase 'two piece ball' as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls, having non-wound cores" provides motivation to combine the two references. Molitor '751 provides motivation, for example, at col. 1, lines 11-15, where it states that the invention is concerned with a "golf ball useful in making balls, particularly two-piece balls, having superior short iron and other playability characteristics."

Further, the Supreme Court has held that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within her or her grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion *KSR* at middle of page 17). Here, the problem of producing a

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golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at bottom of page 4). Polyurethane was a known solution for providing playability properties (Molitor '751 at abstract). The resulting golf ball with a polyurethane outer cover had the expected results (Sullivan '293 at abstract). Thus, the golf ball disclosed in claim 1 of Sullivan '293 is of ordinary skill and common sense.

As to the argument of different thicknesses of the layers, Nesbitt discloses the thickness of an inner layer being in a range from 0.020 inches to 0.070 inches at col. 3, lines 19-25. These ranges overlap the ranges of claim 1. Finally, for the argument of a Shore value of at least 60 for the inner cover, Nesbitt discloses use of "hard, highly flexural modulus resinous material such as type 1605 Surlyn" for this layer at col. 2, lines 36-39. Surlyn 1605, now Surlyn 8940, has a Shore D hardness of 65 (Third Party Requester's Comments at page 27, n.82).

Proposed Third Party Requester Rejection: Ground #5.

The requester submits on pages 22-25 that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 1	Proudfit
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A golf ball comprising:	"This invention relates to golf balls , and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)						
a core;	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>						
an inner cover layer having	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)						
a Shore D hardness of 60 or more molded on said core,	See below with respect to Shore D hardness.						
said inner cover layer having a thickness of 0.100 to 0.010 inches,	<p>"The thickness of the inner layer can be within the range of about 0.0250 to 0.2875 inch to provide a total diameter of the inner layer and core within the range of about 1.550 to 1.590 inch." (Proudfit, col. 7, ll. 37-40)</p> <p>"The preferred dimensions are ... and inner layer thickness of 0.037 inch..." (Proudfit, col. 7, ll. 43-44)</p>						
said inner cover layer comprising a blend of two or more low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>"The composition of the inner cover layer is described in Table 6."</p> <table border="1"> <caption>TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</caption> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Sodium-Suriyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Suriyn 9910</td><td>25%</td></tr> </table> <p>(Proudfit, col. 8, ll. 22-30)</p>	Ionomer Type	Blend Ratio	Sodium-Suriyn 8940	75%	Zinc-Suriyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium-Suriyn 8940	75%						
Zinc-Suriyn 9910	25%						

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an outer cover layer having	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material. " (Proudfit, col. 7, ll. 21-24)
a Shore D hardness of 64 or less molded on said inner cover layer,	"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.
said outer cover layer having a thickness of 0.010 to 0.070 inches, and	"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch..." (Proudfit, col. 7, ll. 40-46)
said outer cover layer comprising a relatively soft polyurethane material.	"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17)

As shown above Proudfit discloses, teaches and suggests a three-piece golf ball (core, inner layer and outer layer) with the layers within the range of claimed thicknesses each layer made from a material having the mechanical properties substantially similar to the claimed mechanical properties. What Proudfit lacks in clearly disclosing are the particular mechanical and chemical properties of the claimed invention. However, Proudfit either incorporates by reference these mechanical and chemical properties and/or the materials used within the Proudfit golf ball inherently have these mechanical and chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of this invention. (Proudfit, col. 1, ll.39-43). The '981 patent discloses the preferably amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Pat, col. 3, ll. 59-60). If Proudfit discloses using blends SURLYN the chemical for making the inner cover and the '981 Patent is the

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formulation for ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and SURLYN 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid. As taught from Exhibit I, SURLYN 8940 has a Shore D hardness of 65; SURLYN 9910 has a Shore D hardness of 64, see Exhibit I. Therefore, this cover blend inherently has a hardness of 60 or more. Proudfit discloses the outer layer being a blend of balata. An example of the blend is disclosed in Table 7 reproduced below.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	1.00
Titanium Dioxide	17.00
Ultramarine Blue color	.50
Zinc DiAcrylate	33.00
Peroxide (Varca 290 XL)	2.50
Total	150.00

Note that Trans Polyisoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore hardness of less than 64.

While Proudfit lacks disclosing the outer layer being made from polyurethane, in an analogous golf ball, Molitor '637 teaches using polyurethane, see Molitor '637, col. 5, ll. 33-41 and col. 18, examples 16 and 17. The request points out on page 25, ll. 7-15, why the use of polyurethane to one of ordinary skill in the art would be readily apparent given that those skilled in the art were more critical of the mechanical properties of a particular material than the

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chemical composition (material type) of the material and those remarks are incorporated herein.

In other words, it was not critical to the "golf ball inventions" of those skilled in the art as to what materials were used to construct the golf balls so long as the materials had the desired mechanical properties which would yield the particular mechanical performance parameters the inventors were trying to achieve, e.g. improved processability; improved durability; cost effectiveness; user acceptance of performance (similar "click" and "feel" to balata) of the golf ball product made from those materials.

The request on page 25, ll. 1-21, explains why one of ordinary skill in the art would be motivated to substitute the outer cover layer taught in Molitor '637 for the outer cover layer disclosed in Proudfit:

Moreover, as recognized by the inventor himself, the particular materials used in the golf balls were not as important as the mechanical properties of those materials. (See Exhibit G at 334.) Because those skilled in the art would look to the mechanical properties of the materials when determining whether certain materials can be substituted for one another, those skilled in the art would recognize that the Estane polyurethane taught by Molitor '637 (having a flexural modulus of about 25,000 psi) and the polymeric outer cover layer material of Proudfit (which has a modulus of between 20,000 and 25,000 psi) would have been substitutable for one another. (Compare Exhibit J with Proudfit, col. 6, lines 28-31.) This would have further suggested to those skilled in the art that the soft polymeric materials taught by Molitor '637, including, for example, the relatively soft, low modulus polyurethane material of Molitor '637 would have been substitutable for the soft polymeric outer cover layer as taught by Proudfit.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the balata-based outer cover layer of Proudfit to include the polyurethane outer cover layer of Molitor '637 because polyurethane was a well known substitute to balata and gives a number of advantages over balata as would have been readily appreciated by those skilled in the art. These advantages include: (1) improved processability; (2) improved durability when compared to balata; (3) cost-effectiveness when compared to balata; and (4) having a good "click" and "feel." All of this would have led one of ordinary skill in the art to replace the soft, low modulus balata-based outer cover layer of Proudfit with the soft, low modulus

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polyurethane outer cover layer material of Molitor '637 at the time of the alleged invention.

Therefore, one of ordinary skill in the art would find the claimed invention as obvious for the motivation given in the request on page 25, ll. 1-21.

This rejection of claim 1 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 5: Patent Owner's Argument

The Patent Owner argues that the rejection is improper because: (1) Proudfit does not describe a golf ball with an outer layer with a Shore D hardness value of 64 or less because the Hebert Declaration's analysis of the Wilson Ultra Tour (as representative of the Proudfit patent) is not correct (Patent Owner's Response page 24 to bottom of page 26); (2) the thickness of Molitor '637's cover layer cannot be combined with thickness of Proudfit's cove layer which is significantly thinner (Patent Owner's Response top of page 27); and, (3) the rejection is impermissible hindsight reconstruction of substitution of materials when the invention, exemplified by the Titleist Pro V1, is a commercial blockbuster (Patent Owner's Response middle of page 27).

Ground 5: Third Party Requester's Comments

Third Party Requester counter argues that, for argument (1) the Wilson Ultra Tour is representative of the Proudfit patent because both disclose a three-piece golf ball with an outer

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cover layer of cis-polybutadiene and synthetic balata (trans-polyisoprene), an inner layer of Na and Zn Surlins, and a compression of 100 (Third Party Requester's Comments at bottom of page 30 to middle of page 31); (2) the thickness layers in the two patents overlap hence one of ordinary skill would realize that the cover materials could be substituted (Third Party Requester's Comments at page 29); and (3) the motivation set forth in the rejection by the Examiner satisfies the requirements *KSR* and is consistent with the motivation to combine Nesbitt and Wu identified by the BPAI (Third Party Requester's Comments at middle of page 30).

Ground 5: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester, and the rejection of claim 1 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. As to the Patent Owner's first argument, the Examiner accepts the Hebert Declaration as competent evidence because it is a sworn declaration. As such, the Examiner will not probe the Declarant's veracity. Since the Wilson Pro Tour had an outer cover made of c-polybutadiene and synthetic balata (trans-polyisoprene) with a Shore D hardness of 52 (Exhibit A of Hebert Declaration), the over cover of Proudfit is considered to have the same hardness value since its composition is the same (Proudfit at col. 8, Table 7; *see* MPEP 2112.01(II)).

As to Patent Owner's second argument, Proudfit discloses that the outer cover can be from 0.0450 to 0.0650 inches in thickness. Molitor '637 discloses an outer cover thickness of 0.060 inches or thicker (Molitor '637 at col. 5, lines 3-7). Since these values overlap in the

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region of 0.060 inches, one of ordinary skill would find it obvious to look to Molitor '637 for an outer cover for the golf ball of Proudfit.

As to Patent Owner's third argument, Examiner considers the language of Molitor '637 that "one skilled in the art can produce a golf ball having the desirable qualities of both Balata and Surlyn resin covered golf balls" (Molitor '637 at col. 2, lines 43-45) to provide motivation to combine the two references. One of the compositions disclosed by Molitor '637 is polyurethane (Molitor '637 at col. 5, lines 33-55). Therefore, one of ordinary skill, having the three-piece ball disclosed by Proudfit would look to Molitor '637 for over cover material to achieve a golf ball with the desired qualities of Balata and Surlyn.

Further, the Supreme Court has held that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within her or her grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion KSR at middle of page 17). Here, the problem of producing a golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at bottom of page 4). Polyurethane was a known solution for providing playability properties (Molitor '637 at abstract). The resulting golf ball with a polyurethane outer cover had the expected results (Sullivan '293 at abstract). Thus, the golf ball disclosed in claim 1 of Sullivan '293 is of ordinary skill and common sense.

The Examiner has not considered the argument of whether the instant invention is exemplified by the Titleist Pro V1.

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Proposed Third Party Requester Rejection: Ground #6.

The requester submits on pages 22-25 that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 1	Proudfit
A golf ball comprising:	"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)
a core;	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>
an inner cover layer having	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)
a Shore D hardness of 60 or more molded on said core,	See below with respect to Shore D hardness.
said inner cover layer having a	"The thickness of the inner layer can be within the range of

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thickness of 0.100 to 0.010 inches,	<p>about 0.0250 to 0.2875 inch to provide a total diameter of the inner layer and core within the range of about 1.550 to 1.590 inch.” (Proudfit, col. 7, ll. 37-40)</p> <p>“The preferred dimensions are ... and inner layer thickness of 0.037 inch...” (Proudfit, col. 7, ll. 43-44)</p>						
said inner cover layer comprising a blend of two or more low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>“The composition of the inner cover layer is described in Table 6.”</p> <table border="1"> <caption>TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</caption> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Sodium-Suriyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Suriyn 9910</td><td>25%</td></tr> </table> <p>(Proudfit, col. 8, ll. 22-30)</p>	Ionomer Type	Blend Ratio	Sodium-Suriyn 8940	75%	Zinc-Suriyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium-Suriyn 8940	75%						
Zinc-Suriyn 9910	25%						
an outer cover layer having	<p>“FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.” (Proudfit, col. 7, ll. 21-24)</p>						
a Shore D hardness of 64 or less molded on said inner cover layer,	<p>“...an outer layer of soft material such as balata or a blend of balata and other elastomers.” (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.</p>						
said outer cover layer having a thickness of 0.010 to 0.070 inches, and	<p>“The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch...” (Proudfit, col. 7, ll. 40-46)</p>						
said outer cover layer comprising a relatively soft polyurethane material.	<p>“...an outer layer of soft material such as balata or a blend of balata and other elastomers.” (Proudfit, col. 5, ll. 15-17)</p>						

As expressed in the request on page 26 and identified above within the claim chart,

Proudfit teaches a golf ball have a two-piece cover including a hard, ionomeric inner cover layer and a soft balata blend outer cover layer. Proudfit lacks in disclosing the use of polyurethane as

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the material for the outer cover layer. Instead, as shown in Table 7, reproduced below, Proudfit discloses the outer cover layer being made of a blend of balata.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	5.00
Titanium Dioxide	17.00
Ultramarine Blue color	.30
Zinc DiAcrylate	33.00
Peroxide (Vernon 230 XL)	2.40
Total	160.00

However, those skilled in the art understand the disadvantages of balata covered golf balls. As admitted by the patent owner

Despite all the benefits of balata, balata covered golf balls are easily cut and/or damaged if mis-hit. Golf balls produced with balata or balata-containing cover compositions therefore have a relatively short lifespan.

(Sullivan '873, col. 1, ll. 39-42). The next step in golf ball cover technology to overcome the problems with balata was the use of SURLYN as an outer cover. However, as described in the request on page 26 Wu teaches the problem with SURLYN as a outer cover on a golf ball.

The problem with SURLYN covered golf balls ... is that they lack the "click" and "feel" which golfers had become accustomed to with balata. "Click" is the sound when the ball is hit by a golf club and "feel" is the overall sensation imparted to the golfer when the ball is hit.

It has been proposed to employ polyurethane as a cover stock for golf balls because, like SURLYN, it has a relatively low price compared to balata and provides superior cut resistance over balata. **However, unlike SURLYN covered golf balls, polyurethane-covered golf balls can be made to have the "click" and "feel" of balata.**

(Wu col. 1, ll. 36-46 (emphasis added)).

As explained in the request on page 26 through page 27 those skilled in the art at the time the claimed invention was made were more critical of the mechanical properties of the materials

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that constructed the layers which impacted the performance of the golf ball more than the materials themselves. See Exhibit G. As identified above Proudfit lacks disclosing polyurethane as the outer cover layer. In analogous golf ball device, Wu's polyurethane material inherently has a flexural modulus of 23,000 psi as averred within the Rule 132 Declaration of Jeffrey L. Dalton at para. 7. Proudfit's outer cover layer material is disclosed as having a flexural modulus of between about 20,000 psi and 25,000 psi. (Proudfit, col. 6, ll. 28-31) Thus, Wu's cover material's flexural modulus falls within the range of Proudfit's cover material. Moreover, Wu's polyurethane material inherently has a Shore D hardness of about 58. See Decl. of Dalton at para. 6. Thus, as evidenced by this declaration, Wu's polyurethane material falls within the claimed range of the outer layer material have a Shore D hardness of less than 64.

Thus, as pointed out in the request on page 27, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute Wu's polyurethane golf ball cover material for Proudfit's balata-blend cover material for the advantages described in this part of the request which is quoted below:

Based on Wu's teachings, one of ordinary skill in the art would have recognized the substitutability of soft polyurethane for soft balata-based materials and the advantages of making such a substitution. These advantages include (1) low price compared to balata; (2) better cut resistance when compared to balata; and (3) a "click" and "feel" that is similar to balata. Moreover, the replacing the balata-material taught by Proudfit would have been obvious to those skilled in the art prior to November 9, 1995 because before that time, the Titleist ProfessionalTM golf ball, which had used Wu's polyurethane material, had replaced balata-covered balls as the market leader. (See Decl. of Jeffrey L. Dalton at ¶¶ 3-4.) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the alleged invention to modify Proudfit's golf ball by replacing the soft balata-based outer cover layer with an outer cover layer made of soft polyurethane material because Wu's polyurethane material has similar mechanical properties and provides numerous advantages over balata while exhibiting the "click" and "feel" of balata.

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This rejection of claim 1 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 6: Patent Owner's Argument

The Patent Owner argues that the rejection is improper because: (1) while the patent of Wu describes the use of polyurethane as an outer cover, it discloses neither the thickness nor the Shore D hardness of this polyurethane layer (Patent Owner Response at bottom of page 27); (2) Wu, herself, at her deposition could not predict the final hardness value of her cover (Patent Owner Response at middle of page 28); (3) the Dalton Declaration is not competent evidence of the hardness value of Wu's polyurethane layer (Patent Owner Response at middle of page 28); and, (4) no motivation to combine the references, absent hindsight, because motivation to try, *i.e.*, to substitute one material for another, is not the standard (Patent Owner Response at bottom of page 28 to top of page 29).

Ground 6: Third Party Requester's Comments

Third Party Requester counter argues that, for argument (4), applying the standard of *KSR* would result in one of ordinary skill using polyurethane as a golf ball cover since it had been known for decades as an excellent golf ball material (Third Party Requester's Comments at middle of page 32). Further, the rationale of *Ex parte Sullivan* would equally apply here (Third Party Requester's Comments at page 32).

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Ground 6: Examiner's Response to the Argument and Comments.

Examiner agrees with the comments of the Third Party Requester, and the rejection of claim 1 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. As to the Patent Owner's first, second, and third arguments, the Examiner accepts the Dalton Declaration as competent evidence because it is a sworn declaration. As such, the Examiner will not probe the Declarant's veracity. Hence, the Shore D hardness value for Wu's cover is considered to be 58. The thickness of the outer cover is found in Proudfit where it is disclosed that the thickness can be from 0.0450 to 0.0650 inches (Proudfit at col. 7, lines 40-47). Wu's deposition is not dispositive, here, because of the Dalton Declaration.

As to Patent Owner's fourth argument, Examiner considers the language of Wu, itself, to provide motivation to combine because golf balls made with polyurethane possess "improved shear resistance and cut resistance compared to golf balls having covers made from either balata or SURLYN" (Wu at col. 2, lines 29-32). Also, golf balls with polyurethane covers "can be made to have the "click" and "feel" of balata" (Wu at col. 1, lines 44-46). Therefore, one of ordinary skill, having the three-piece ball disclosed by Proudfit would look to Wu for outer cover material to achieve a golf ball with the desired qualities of Balata and Surllyn.

Further, the Supreme Court has held that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within her or her grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion *KSR* at middle of page 17). Here, the problem of producing a golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at

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bottom of page 4). Polyurethane was a known solution for providing playability properties (Wu at col. 1 lines 27-46). The resulting golf ball with a polyurethane outer cover had the expected results (Sullivan '293 at abstract). Thus, the golf ball disclosed in claim 1 of Sullivan '293 is of ordinary skill and common sense.

Finally, the Court has explicitly approved of the "obvious to try" standard for combinations as above (slip opinion *KSR* at middle of page 17).

Proposed Third Party Requester Rejection: Ground #7.

The requester submits on pages 27-29 that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 1	Proudfit
A golf ball comprising:	"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)
a core;	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core</p>

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	was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball.” (Proudfit, col. 7, ll. 51-55)										
an inner cover layer having	“FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.” (Proudfit, col. 7, ll. 21-24)										
a Shore D hardness of 60 or more molded on said core,	See below with respect to Shore D hardness.										
said inner cover layer having a thickness of 0.100 to 0.010 inches,	<p>“The thickness of the inner layer can be within the range of about 0.0250 to 0.2875 inch to provide a total diameter of the inner layer and core within the range of about 1.550 to 1.590 inch.” (Proudfit, col. 7, ll. 37-40)</p> <p>“The preferred dimensions are ... and inner layer thickness of 0.037 inch...” (Proudfit, col. 7, ll. 43-44)</p>										
said inner cover layer comprising a blend of two or more low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>“The composition of the inner cover layer is described in Table 6.”</p> <table border="1"> <tr> <th colspan="2">TABLE 6</th></tr> <tr> <th colspan="2">Composition of Inner Layer of Cover (Parts by Weight)</th></tr> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Ethlen- Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc- Surlyn 9910</td><td>25%</td></tr> </table> <p>(Proudfit, col. 8, ll. 22-30)</p>	TABLE 6		Composition of Inner Layer of Cover (Parts by Weight)		Ionomer Type	Blend Ratio	Ethlen- Surlyn 8940	75%	Zinc- Surlyn 9910	25%
TABLE 6											
Composition of Inner Layer of Cover (Parts by Weight)											
Ionomer Type	Blend Ratio										
Ethlen- Surlyn 8940	75%										
Zinc- Surlyn 9910	25%										
an outer cover layer having	“FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material. ” (Proudfit, col. 7, ll. 21-24)										
a Shore D hardness of 64 or less molded on said inner cover layer,	“...an outer layer of soft material such as balata or a blend of balata and other elastomers.” (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.										
said outer cover layer having a	“The thickness of the outer layer can be within the range of										

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thickness of 0.010 to 0.070 inches, and	about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch....” (Proudfit, col. 7, ll. 40-46)
said outer cover layer comprising a relatively soft polyurethane material.	“...an outer layer of soft material such as balata or a blend of balata and other elastomers.” (Proudfit, col. 5, ll. 15-17)

As expressed in the request on page 27 and identified above within the claim chart, Proudfit teaches a golf ball have a two-piece cover including a hard, ionomeric inner cover layer and a soft balata blend outer cover layer. Proudfit lacks in disclosing the use of polyurethane as the material for the outer cover layer. Instead, as shown in Table 7, reproduced below, Proudfit discloses the outer cover layer being made of a blend of balata.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	3.00
Titanium Dioxide	17.00
Ultramarine Blue color	.30
Zinc DiAcrylate	33.00
Peroxide (V500 230 XL)	2.50
Total	160.00

However, those skilled in the art understand the disadvantages of balata covered golf balls. As admitted by the patent owner:

[d]espite all the benefits of balata, balata covered golf balls are easily cut and/or damaged if mis-hit. Golf balls produced with balata or balata-containing cover compositions therefore have a relatively short lifespan.

(Sullivan '873, col. 1, ll. 39-42). With this disadvantage of balata covered golf balls, golf ball designers looked for materials that would provide the same “click” and “feel” golfers expected and have increased durability.

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As pointed out in the request on page 28, lines 4-15, in an analogous golf ball, Molitor

'751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a **cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76.** The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a **thermoplastic urethane having a shore A hardness less than 95** and (2) an ionomer having a shore D hardness greater than 55. The ionomer comprises olefinic groups having two to four carbon atoms copolymerized with acrylic or methacrylic acid groups and cross-linked with metal ions, preferably sodium or zinc ions. **The primary components of the blended cover are set at a weight ratio so as to result in a cover material after molding having a shore C hardness within the range of 70 to 85, preferably 72 to 76.** Preferably, the urethane component of the cover material has a tensile strength greater than 2500 psi and an elongation at break greater than 250%. A preferred cover material comprises about 8 parts of the thermoplastic urethane and between 1 and 4 parts ionomer. Preferably, the cover is no greater than 0.060 inch thick. Thinner covers appear to maximize the short iron playability characteristics of the balls.

(Molitor '751, col. 33-57 (emphasis added)). Thus, Molitor '751 teaches having a outer cover layer with a Shore C hardness less than 85 and preferably between 72 and 76. Moreover, Molitor '751 teaches what golf balls are included in the definition of "two-piece" ball within its instant specification.

The phrase "two-piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, **but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls having non-wound cores.**

Molitor '751, col. 3, ll. 7-12 (emphasis added)). Proudfit, likewise, teaches the two-piece golf balls can fit within this definition.

FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.

(Proudfit, col. 7, ll. 21-24).

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As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art "translates" a Shore C value to a Shore D value is by taking the known Shore hardness values with a given range, in this instance Shore C, for given materials, in this instance a polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

As stated in the request spanning pages 28-29

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft outer cover layer of Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by

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Molitor '751 to provide a golf ball that includes "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, ll. 61-68)

This rejection of claim 1 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 7: Patent Owner's Argument

The Patent Owner argues that the rejection is improper because: (1) Molitor '751 describes the cover of his golf ball with hardness values in terms of Shore C, hence, one of ordinary skill would not look to combine this teaching with the patent of Proudfit to have a ball with Shore D hardness values, because the two hardness values, or scales, have no simple mathematical correlation (Patent Owner's Response at middle of page 29); and, (2) no motivation to combine Proudfit with Molitor '751 because the Molitor '751 ball's construction is different than that of the claimed golf balls (Patent Owner's Response at bottom of page 29 continuing to top of page 30).

Ground 7: Third Party Requester's Comments

Third Party Requester counter argues that, for argument (1) hardness values of Shore C and Shore D are convertible as evidenced by many published methods (Third Party Requester's Comments at middle of page 33). For argument (2), the Third Party Requester states that.

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motivation to combine exists because Molitor '751, itself, states that its cover can be used with the three-piece golf balls (Third Party Requester's Comments at top of page 34).

Ground 7: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester, and the rejection of claim 1 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. As to the Patent Owner's first argument, Examiner agrees with the Third Party Requester's comments that a correlation, or conversion, exists between the two hardness scales, Shore C and Shore D, because, *inter alia*, Sullivan '873 give a conversion of the two scales at col. 3, lines 42-43. Hence, one of ordinary skill would not be deterred from use of prior art regardless of the hardness scale used to define its various layers.

As to the second argument, Examiner considers the language of the Molitor '751 that "[t]he phrase 'two piece ball' as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls, having non-wound cores" provides motivation to combine the two references. Proudfit, like Nesbitt, disclose golf balls with a core, inner cover, and inner cover. Molitor '751 provides motivation, for example, at col. 1, lines 11-15, where it states that the invention is concerned with a "golf ball useful in making balls, particularly two-piece balls, having superior short iron and other playability characteristics."

Further, the Supreme Court has held that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a

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person of ordinary skill has good reason to pursue the known options within her or her grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion *KSR* at middle of page 17). Here, the problem of producing a golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at bottom of page 4). Polyurethane was a known solution for providing playability properties (Molitor '751 at abstract). The resulting golf ball with a polyurethane outer cover had the expected results (Sullivan '293 at abstract). Thus, the golf ball disclosed in claim 1 of Sullivan '293 is of ordinary skill and common sense.

Re. Claim 2

Proposed Third Party Requester Rejection: Ground #8.

The requester submits on pages 29-30 that claim 2 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 2	Nesbitt
The golf ball according to claim 1,	See above.
wherein said golf ball has an overall diameter of 1.680 inches or more.	<p>"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.)</p> <p>"This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum</p>

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	with an outer or cover layer 16 of a soft, low flexural modulus resin " (Nesbitt, col. 3, lines 34-38.)
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This rejection of claim 2 based on Nesbitt incorporating by reference Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 8: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 8: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

Ground 8: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #9.

In the alternative, the requester submits on page 30 that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

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Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 2	Nesbitt
The golf ball according to claim 1,	See above.
wherein said golf ball has an overall diameter of 1.680 inches or more.	<p>"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.)</p> <p>"This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin " (Nesbitt, col. 3, lines 34-38.)</p>

This rejection of claim 2 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 9: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 9: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

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Ground 9: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 2 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #10.

The requester submits on page 30 of the request that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 2	Nesbitt
The golf ball according to claim 1,	See above.
wherein said golf ball has an overall diameter of 1.680 inches or more.	<p>"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.)</p> <p>"This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)</p>

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This rejection of claim 2 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 10: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 10: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 10: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 2 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #11.

The requester submits on page 30 of the request that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '751.

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Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 2	Nesbitt
The golf ball according to claim 1,	See above.
wherein said golf ball has an overall diameter of 1.680 inches or more.	<p>"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.)</p> <p>"This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)</p>

This rejection of claim 2 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 11: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 11: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 11: Examiner's Response to the Argument and Comments

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Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 2 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #12.

The requester submits on pages 30-31 that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 2	Proudfit
The golf ball according to claim 1,	See above.
wherein said golf ball has an overall diameter of 1.680 inches or more.	"The preferred dimensions are a core diameter of 1.500 inch, and inner layer thickness of 0.037 inch (inner layer diameter of 1.575 inch), and an outer layer thickness of 0.0525 inch (total ball diameter of 1.680 inch)." (Proudfit, col. 7, lines 43-47.)

This rejection of claim 2 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

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Ground 12: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 12: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 12: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 2 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #13.

The requester submits on pages 30-31 that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 2	Proudfit
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The golf ball according to claim 1,	See above.
wherein said golf ball has an overall diameter of 1.680 inches or more.	"The preferred dimensions are a core diameter of 1.500 inch, and inner layer thickness of 0.037 inch (inner layer diameter of 1.575 inch), and an outer layer thickness of 0.0525 inch (total ball diameter of 1.680 inch)." (Proudfit, col. 7, lines 43-47.)

This rejection of claim 2 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 13: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 13: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 13: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 2 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #14.

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The requester submits on pages 30-31 that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor, U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 2	Proudfit
The golf ball according to claim 1,	See above.
wherein said golf ball has an overall diameter of 1.680 inches or more.	"The preferred dimensions are a core diameter of 1.500 inch, and inner layer thickness of 0.037 inch (inner layer diameter of 1.575 inch), and an outer layer thickness of 0.0525 inch (total ball diameter of 1.680 inch)." (Proudfit, col. 7, lines 43-47.)

This rejection of claim 2 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 14: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 14: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

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Ground 14: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 2 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

Re. Claim 3

Proposed Third Party Requester Rejection: Ground #15.

The requester submits on pages 31-32 that claim 3 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 3	Nesbitt (by reference Molitor '637)
The golf ball according to claim 1, wherein said inner cover layer has a thickness of about 0.050 inches,	See above. "It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.055 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)

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and said golf ball has an overall diameter of 1.680 inches or more.	<p>“According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches” (Nesbitt, col. 2, lines 50-52.)</p> <p>“This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin” (Nesbitt, col. 3, lines 34-38.)</p>
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This rejection of claim 3 based on Nesbitt incorporating by reference Molitor ‘637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 15: Patent Owner’s Argument

Patent Owner does not specifically argue this rejection.

Ground 15: Third Party Requester’s Comments

Third Party Requester’s arguments for this claim are the same as given *supra* at “Ground 1: Third Party Requester’s Comments.”

Ground 15: Examiner’s Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See “Ground 1: Examiner’s Response to the Argument and Comments,” *supra*.

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Proposed Third Party Requester Rejection: Ground #16.

In the alternative, the requester submits on page 32 that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 3	Nesbitt
The golf ball according to claim 1,	See above.
wherein said inner cover layer has a thickness of about 0.050 inches,	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.055 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
and said golf ball has an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.) "This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)

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This rejection of claim 3 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 16: Patent Owner's Argument

Patent Owner argues that the minimum thickness for the outer layer of the cover of Molitor '637 is 0.060 inches while this claim requires a thickness of 0.055 for this layer (Patent Owner's Response at middle of page 17).

Ground 16: Third Party Requester's Comments

Third Party Requester counter argues that Nesbitt discloses a range of 0.020 to 0.100 inches for the thickness of the outer cover of a golf ball (Nesbitt at col. 3, lines 22-25). The holding in *KRS* would dictate that one of ordinary skill would know to use the material of Molitor '637, polyurethane, with the thickness of Nesbitt (Third Party Requester's Comments at page 20-21).

Ground 16: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester, and the rejection of claim 3 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. Since Nesbitt references the Molitor '637 patent, one of ordinary skill would logically look at its complete disclosure which includes the use of polyurethane as an outer cover. Using the thickness values of Nesbitt with polyurethane would be obvious because Nesbitt states that "the

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thickness of the inner layer . . . and the thickness of outer layer . . . may be varied to secure the advantages herein mentioned" at col. 3, lines 16-19. The advantages Nesbitt wishes to achieve are both distance and feel in one golf ball (Nesbitt at col. 2, lines 1-9).

Proposed Third Party Requester Rejection: Ground #17.

The requester submits on page 32 that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 3	Nesbitt
The golf ball according to claim 1,	See above.
wherein said inner cover layer has a thickness of about 0.050 inches,	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.055 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
and said golf ball has an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680

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	<p>inches" (Nesbitt, col. 2, lines 50-52.)</p> <p>"This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)</p>
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This rejection of claim 3 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 17: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 3: Patent Owner's Argument," *supra*.

Ground 17: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 3: Third Party Requester's Comments," *supra*.

Ground 17: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 3 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

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Proposed Third Party Requester Rejection: Ground #18.

The requester submits on page 32 that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 3	Nesbitt
The golf ball according to claim 1,	See above.
wherein said inner cover layer has a thickness of about 0.050 inches,	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.055 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
and said golf ball has an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.) "This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)

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This rejection of claim 3 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 18: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 18: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 18: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 2 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejections: Ground #19-21.

The requester submits on pages 32-33 that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637); Wu, U.S. Pat. No. 5,334,673 (Wu); or Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

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These rejections are not adopted for the reasons given in Order Granting Reexamination, dated 04/07/2006, at paragraph #23, which is incorporated herein.

Re. Claim 4

Proposed Third Party Requester Rejection: Ground #22.

The requester submits on pages 34-38 that claim 4 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 4	Nesbitt (with Molitor '637 incorporated by reference)
A multi-layer golf ball comprising:	"The disclosure embraces a golf ball and method of making same...." (Nesbitt, Abstract; FIGS 1 & 2.)
a spherical core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere." (Nesbitt, col. 2, lines 31-34.)
an inner cover layer having	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, lines 31-34.)
Shore D hardness of about 60 or more molded over said spherical core,	<p>"[I]nner cover 14 of molded hard, highly flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I. DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p>"[A] center or core 12 ... is molded with a layer of hard, high modulus Surlyn resin, such as Surlyn type 1605..." (Nesbitt, col. 3, lines 27-29.)</p>

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	<p><u>Exhibit I</u>: DuPont Surlyn Product Information: Surlyn® 8940 (formerly 1605 (see '293 patent, col. 2, lines 54-55)) has a Shore D hardness of 65.</p>
<p>said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and</p>	<p>"Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 [inner] and 16 [outer] for the golf ball of this invention." (Nesbitt, col. 3, ll. 56-61).</p> <p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
<p>having a modulus of from about 15,000 to about 70,000 psi; and</p>	<p>See below.</p>
<p>an outer cover layer having</p>	<p>"An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14" (Nesbitt, col. 2, lines 43-47.)</p> <p><u>Nesbitt</u>: "Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p>
<p>a Shore D hardness of about 64 or less</p>	<p><u>Molitor '637</u>: Teaches the use of ESTANE 58133 in Examples 16 and 17. (Molitor '637, col. 18, ll. 32-60)</p> <p>ESTANE 58133 has a Shore D hardness of 55, see <u>Exhibit J</u> (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>Also see below why this cover material has inherently a Shore D hardness of 55.</p>

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disposed about said inner cover layer and defining a plurality of dimples to form a multi-layer golf ball,	<p>"An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14" (Nesbitt, col. 2, lines 43-47.)</p> <p>"[T]he outer layer or cover 16 being of dimpled configuration" (Nesbitt, col. 2, lines 48-49; Fig. 2.)</p>
said outer cover layer comprising polyurethane based material.	<p>Nesbitt: "Reference is made to the application Set. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 and 16." (Nesbitt, col. 3, lines 54-60.)</p> <p>Molitor '637: Teaches cover materials including "polyurethanes such as are prepared from polyols and organic polyisocyanates"; specifically Estane 58133 thermoplastic polyurethane. (Molitor '637, col. 5, lines 39-41; col. 18, lines 31-59 (examples 16 and 17).)</p> <p>Exhibit J: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

As mentioned above, Nesbitt with incorporation by reference of Molitor '637 as describing an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the

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Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt incorporating Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

Also, as mentioned above, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64. Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Moreover, Molitor '637 teaches a list of materials that may adapted for use in the invention:

Homopolymeric and copolymeric substances, such as (1) vinyl resins formed by the polymerization of vinyl chloride or by the copolymerization of vinyl chloride with unsaturated polymerizable compounds, e.g., vinyl esters; (2) polyolefins such as polyethylene, polypropylene, polybutylene, transpolyisoprene, and the like, including copolymers of polyolefins; (3) polyurethanes such as are prepared from polyols and organic polyisocyanates; (4) polyamides such as

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polyhexamethylene; (5) polystyrene, high impact polystyrene, styrene acrylonitrile copolymer and ABS, which is acrylonitrile, butadiene styrene copolymer; (6) acrylic resins as exemplified by the copolymers of methylmethacrylate, acrylonitrile, and styrene, etc.; (7) thermoplastic rubbers such as the urethanes, copolymers of ethylene and propylene, and transpolyisoprene, block copolymers of styrene and cispolybutadiene, etc.; and (8) polyphenylene oxide resins, or a blend with high impact polystyrene known by the trade name "Noryl."

See Molitor '637, col. 5, ll. 33-50.

In addition, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334.

This rejection of claim 4 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 22: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 22: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

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Ground 22: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #23.

In the alternative, the requester submits on pages 34-48 that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 4	Nesbitt mentioning Molitor '637
A multi-layer golf ball comprising:	"The disclosure embraces a golf ball and method of making same...." (Nesbitt, Abstract; FIGS 1 & 2.)
a spherical core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere." (Nesbitt, col. 2, lines 31-34.)
an inner cover layer having	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, lines 31-34.)

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Shore D hardness of about 60 or more molded over said spherical core,	<p>"[I]nner cover 14 of molded hard, highly flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I. DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p>"[A] center or core 12 ... is molded with a layer of hard, high modulus Surlyn resin, such as Surlyn type 1605..." (Nesbitt, col. 3, lines 27-29.)</p> <p><u>Exhibit I: DuPont Surlyn Product Information: Surlyn® 8940 (formerly 1605 (see '293 patent, col. 2, lines 54-55)) has a Shore D hardness of 65.</u></p>
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 [inner] and 16 [outer] for the golf ball of this invention." (Nesbitt, col. 3, ll. 56-61).</p> <p><u>Molitor '637:</u> Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
having a modulus of from about 15,000 to about 70,000 psi; and	See below.
an outer cover layer having	<p>"An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14" (Nesbitt, col. 2, lines 43-47.)</p> <p><u>Nesbitt:</u> "Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p>
a Shore D hardness of about 64 or less	<u>Molitor '637:</u> Teaches the use of ESTANE 58133 in Examples 16 and 17. (Molitor '637, col. 18, ll. 32-60)

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	<p>ESTANE 58133 has a Shore D hardness of 55, see <u>Exhibit J</u> (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>Also see below why this cover material has inherently a Shore D hardness of 55.</p>
disposed about said inner cover layer and defining a plurality of dimples to form a multi-layer golf ball,	<p>"An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14" (Nesbitt, col. 2, lines 43-47.)</p> <p>"[T]he outer layer or cover 16 being of dimpled configuration" (Nesbitt, col. 2, lines 48-49; Fig. 2.)</p>
said outer cover layer comprising polyurethane based material.	<p>Nesbitt: "Reference is made to the application Set. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 and 16." (Nesbitt, col. 3, lines 54-60.)</p> <p>Molitor '637: Teaches cover materials including "polyurethanes such as are prepared from polyols and organic polyisocyanates"; specifically Estane 58133 thermoplastic polyurethane. (Molitor '637, col. 5, lines 39-41; col. 18, lines 31-59 (examples 16 and 17).)</p> <p>Exhibit J: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

As mentioned above, Nesbitt references Molitor '637 as describing an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by

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weight of unsaturated carboxylic acid.” ‘981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been “redesignated” as SURLYN 8940 and SURLYN 1557 has been “redesignated” as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan ‘873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt’s first (inner) layer and is a sodium ion based low acid “(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi.” See ‘873 Patent, col. 2, ll. 43-50. Moreover, as shown in the “Properties Grid for Selected Industrial Grades of SURLYN” SURLYN 9650’s ordinate compared to the other grades of SURLYN is toward the “Low % Acid” side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor ‘637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

Also, as mentioned above, Molitor ‘637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J “ESTANE 58133 TPU Product Data Sheet”. A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64. Therefore, Molitor ‘637’s teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Moreover, Molitor ‘637 teaches a list of materials that may adapted for use in the invention:

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Homopolymeric and copolymeric substances, such as (1) vinyl resins formed by the polymerization of vinyl chloride or by the copolymerization of vinyl chloride with unsaturated polymerizable compounds, e.g., vinyl esters; (2) polyolefins such as polyethylene, polypropylene, polybutylene, transpolyisoprene, and the like, including copolymers of polyolefins; (3) polyurethanes such as are prepared from polyols and organic polyisocyanates; (4) polyamides such as polyhexamethylene; (5) polystyrene, high impact polystyrene, styrene acrylonitrile copolymer and ABS, which is acrylonitrile, butadiene styrene copolymer; (6) acrylic resins as exemplified by the copolymers of methylmethacrylate, acrylonitrile, and styrene, etc.; (7) thermoplastic rubbers such as the urethanes, copolymers of ethylene and propylene, and transpolyisoprene, block copolymers of styrene and cispolybutadiene, etc.; and (8) polyphenylene oxide resins, or a blend with high impact polystyrene known by the trade name "Noryl."

See Molitor '637, col. 5, ll. 33-50.

In addition, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334.

Thus, because it appears that to one of ordinary skill in the art at the time the invention was created that the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

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This rejection of claim 4 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 23: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 23: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 23: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #24.

The requester submits on pages 38-40 of the request that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

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Below is a claim chart identifying the claim limitations and which reference Nesbitt or Wu discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 4	Nesbitt mentioning Molitor '637 with Wu (teaching)
A multi-layer golf ball comprising:	"The disclosure embraces a golf ball and method of making same...." (Nesbitt, Abstract; FIGS 1 & 2.)
a spherical core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere." (Nesbitt, col. 2, lines 31-34.)
an inner cover layer having	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, lines 31-34.)
Shore D hardness of about 60 or more molded over said spherical core,	<p>"[I]nner cover 14 of molded hard, highly flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I. DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p>"[A] center or core 12 ... is molded with a layer of hard, high modulus Surlyn resin, such as Surlyn type 1605..." (Nesbitt, col. 3, lines 27-29.)</p> <p><u>Exhibit I: DuPont Surlyn Product Information: Surlyn® 8940 (formerly 1605 (see '293 patent, col. 2, lines 54-55)) has a Shore D hardness of 65.</u></p>
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	"Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 [inner] and 16 [outer] for the golf ball of this invention."

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	<p>(Nesbitt, col. 3, ll. 56-61).</p> <p>Molitor '637: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
having a modulus of from about 15,000 to about 70,000 psi; and	See below.
an outer cover layer having	<p>"An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14" (Nesbitt, col. 2, lines 43-47.)</p> <p>Nesbitt: "Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p> <p>Wu: "Preferably, a golf ball is made in accordance with the present invention by molding a cover about a core wherein the cover is formed from a polyurethane composition comprising a polyurethane prepolymer and a slow-reacting polyamine curing agent or a difunctional glycol." (Wu, col. 3, ll. 62-66.)</p>
a Shore D hardness of about 64 or less	<p>Molitor '637: Teaches the use of ESTANE 58133 in Examples 16 and 17. (Molitor '637, col. 18, ll. 32-60)</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>Also see below why this cover material has inherently a Shore D hardness of 55.</p> <p>Wu: "With polyurethanes made in accordance with the present invention, the degree of cure which has taken place is dependent upon, <i>inter alia</i>, the time, temperature, type of curative, and amount of catalyst used. It has been found that the degree of cure of the cover composition is directly</p>

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	<p>proportional to the hardness of the composition. A hardness of about 10D to 30D, Shore D hardness for the cover stock at the end of the intermediate curing step (i.e. just prior to the final molding step) has been found to be suitable for the present invention, More preferred is a hardness of about 12D to 20D." (Wu, col. 6, ll. 27-38.)</p> <p>See below for more explanation of how Wu teaches and/or suggests the Shore D hardness of 64 or less limitation explanation.</p>
disposed about said inner cover layer and defining a plurality of dimples to form a multi-layer golf ball,	<p>"An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14" (Nesbitt, col. 2, lines 43-47.)</p> <p>"[T]he outer layer or cover 16 being of dimpled configuration" (Nesbitt, col. 2, lines 48-49; Fig. 2.)</p>
said outer cover layer comprising polyurethane based material.	<p>Nesbitt: "Reference is made to the application Set. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 and 16." (Nesbitt, col. 3, lines 54-60.)</p> <p>Molitor '637: Teaches cover materials including "polyurethanes such as are prepared from polyols and organic polyisocyanates"; specifically Estane 58133 thermoplastic polyurethane. (Molitor '637, col. 5, lines 39-41; col. 18, lines 31-59 (examples 16 and 17).)</p> <p>Exhibit J: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p> <p>Wu: "With polyurethanes made in accordance with the present invention, the degree of cure which has taken place is dependent upon, <i>inter alia</i>, the time, temperature, type of curative, and amount of catalyst used. It has been found that the degree of cure of the cover composition is directly proportional to the hardness of the composition. A hardness of about 10D to 30D, Shore D hardness for the cover stock at the end of the intermediate curing step (i.e.</p>

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	just prior to the final molding step) has been found to be suitable for the present invention. More preferred is a hardness of about 12D to 20D." (Wu, col. 6, ll. 27-38.)
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As mentioned above, Nesbitt references Molitor '637 as describing an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

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As mentioned above, Nesbitt mentioning Molitor '637 teaches the use of particular polyurethane materials for the use as an outer layer. Wu teaches that polyurethane was being used as the outer layer of golf ball *circa* 1993. Wu further teaches in col. 1:36-46 that SURLYN covered golf balls lack the "click" and "feel" of balata which golfers have become accustomed to such sensations and polyurethane covered golf balls can be made to have a similar "click" and "feel" of balata. Wu also at least teaches that polyurethanes made according to its invention will have Shore D hardness directly proportional to the degree of cure of the cover; and this Shore D hardness ranges from 10 to 30, preferably 12 to 20 on the Shore D scale, see col. 6:26-38. This teaching of Shore D hardness is directed to an intermediate curing step product prior to the final molding process to finish the golf ball. Exhibit C demonstrates the actual finished golf ball product having the cover layer that Wu teaches within its disclosure. Exhibit C teaches that the golf ball taught therein is covered by the following patents: 4,783,078; 4,846,910; 4,858,923; 4,904,320; 4,915,390; 5,007,594; 5,080,367; 5,133,509; **5,334,673**; and D339,074. The '673 Patent teaches the cover sock of the Exhibit C finished golf ball. Exhibit C teaches that the golf ball taught therein has a cover material made from an "elastomer", having a thickness of .050", and 58 Shore D hardness. All three properties are within the range of mechanical properties of the claim invention (polyurethane is an elastomer, cover layer thickness ranges from 0.010 to 0.070 inches and the Shore D hardness is less than 64). Because it has been admitted by the inventor of the Sullivan '893 patent that the particular chemical properties of the materials (the chemical composition) used in the construction of a golf ball lack criticality as compared to the mechanical properties (the Shore D hardness, flexural modulus, layer thickness) of those compounds used for constructing the different layers (Exhibit G at 334), one of ordinary skill in

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the art at the time the invention was made would find it obvious to incorporate the teachings of Wu which inherently include the teachings of Shore hardness for the fully cured cover layer as taught in Exhibit C as obvious equivalent materials in order to achieve the same end result of providing a cover layer that has the same "click" and "feel" of a balata cover which the extra durability of an elastomeric material.

This rejection of claim 4 based on Nesbitt mentioning Molitor '637 in view of Wu as evidenced by Exhibit C was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 24: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 3: Patent Owner's Argument," *supra*.

Ground 24: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 3: Third Party Requester's Comments," *supra*.

Ground 24: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

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Proposed Third Party Requester Rejection: Ground #25.

The requester submits on pages 40-42 of the request that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 4	Nesbitt mentioning Molitor '637
A multi-layer golf ball comprising:	"The disclosure embraces a golf ball and method of making same...." (Nesbitt, Abstract; FIGS 1 & 2.)
a spherical core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere." (Nesbitt, col. 2, lines 31-34.)
an inner cover layer having	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, lines 31-34.)
Shore D hardness of about 60 or more molded over said spherical core,	"[I]nner cover 14 of molded hard, highly flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I. DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.) "[A] center or core 12 ... is molded with a layer of hard,

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	<p>high modulus Surlyn resin, such as Surlyn type 1605..." (Nesbitt, col. 3, lines 27-29.)</p> <p><u>Exhibit I</u>: DuPont Surlyn Product Information: Surlyn® 8940 (formerly 1605 (see '293 patent, col. 2, lines 54-55)) has a Shore D hardness of 65.</p>
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 [inner] and 16 [outer] for the golf ball of this invention." (Nesbitt, col. 3, ll. 56-61).</p> <p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
having a modulus of from about 15,000 to about 70,000 psi; and	See below.
an outer cover layer having	<p>"An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14" (Nesbitt, col. 2, lines 43-47.)</p> <p><u>Nesbitt</u>: "Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p>
a Shore D hardness of about 64 or less	<p><u>Molitor '637</u>: Teaches the use of ESTANE 58133 in Examples 16 and 17. (Molitor '637, col. 18, ll. 32-60)</p> <p>ESTANE 58133 has a Shore D hardness of 55, see <u>Exhibit J</u> (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>Also see below why this cover material has inherently a</p>

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	Shore D hardness of 55.
disposed about said inner cover layer and defining a plurality of dimples to form a multi-layer golf ball,	<p>"An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14" (Nesbitt, col. 2, lines 43-47.)</p> <p>"[T]he outer layer or cover 16 being of dimpled configuration" (Nesbitt, col. 2, lines 48-49; Fig. 2.)</p>
said outer cover layer comprising polyurethane based material.	<p>Nesbitt: "Reference is made to the application Set. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 and 16." (Nesbitt, col. 3, lines 54-60.)</p> <p>Molitor '637: Teaches cover materials including "polyurethanes such as are prepared from polyols and organic polyisocyanates"; specifically Estane 58133 thermoplastic polyurethane. (Molitor '637, col. 5, lines 39-41; col. 18, lines 31-59 (examples 16 and 17).)</p> <p>Exhibit J: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionic thermoplastic elastomer.</p>

As shown above in the claim chart, Nesbitt mentioning Molitor '673 suggests the use of a soft outer cover layer including a polyurethane material. In an analogous golf ball, Molitor '751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76. The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a thermoplastic urethane having a shore A hardness less than 95 and (2) an ionomer having a shore D hardness greater than 55.

(Molitor '751, col. 2, ll.33-49 (emphasis added)).

Moreover, in explaining what constitutes a two-piece golf ball, Molitor '751 teaches that:

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The phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls have non-wound cores.

(Molitor '751, col. 3, ll. 7-12 (emphasis added)).

As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art "translates" a Shore C value to a Shore D value is by taking the known Shore hardness values with a given range, in this instance Shore C, for given materials, in this instance polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

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As stated in the request on page 39

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft outer cover layer of Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by Molitor '751 to provide a golf ball that includes "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, ll. 61-68)

As mentioned above, Nesbitt references Molitor '637 as describing an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more

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than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

As stated in the request spanning pages 41-42

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft non-ionomeric polymeric outer cover layer incorporated by Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by Molitor '751 to provide a golf ball that includes "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, ll. 61-68)

Moreover, because it appears that to one of ordinary skill in the art at the time the invention was created that the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 4 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 25: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 4: Patent Owner's Argument," *supra*.

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Ground 25: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 4: Third Party Requester's Comments," *supra*.

Ground 25: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #26.

The requester submits on pages 42-46 that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

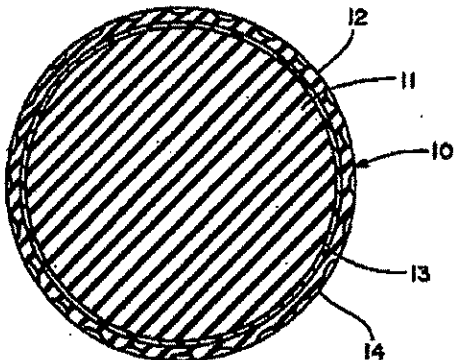
Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 4	Proudfit
A multi-layer golf ball comprising:	"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)

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<p>a spherical core;</p>	 <p>“FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 [in the shape of a sphere] and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.” (Proudfit, col. 7, ll. 21-24)</p> <p>“Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball.” (Proudfit, col. 7, ll. 51-55)</p>
<p>an inner cover layer having</p>	<p>“FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.” (Proudfit, col. 7, ll. 21-24)</p>
<p>Shore D hardness of about 60 or more molded over said spherical core,</p>	<p><u>Exhibit I</u>: Surlyn® 8940 has a Shore D hardness of 65; Surlyn® 9910 has a Shore D hardness of 64.</p> <p>Therefore, this cover blend has a hardness of 60 or more. (See Decl. of Edmund A. Hebert at ¶¶ 8-9.)</p> <p>“The inner layer can be molded in one of two methods: 1. Injection molded over the core in a manner which is conventionally used to injection mold ionomers over a solid core. 2. Injection mold halfshells, place halfshells over the core,</p>

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	<p>compression mold the inner cover over the core.” (Proudfit, col. 8, lines 32-38.)</p> <p>See below with respect to Shore D hardness.</p>						
<p>said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and</p>	<p>“The composition of the inner cover layer is described in Table 6.”</p> <table border="1"> <caption>TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</caption> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Sodium- Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc- Surlyn 9910</td><td>25%</td></tr> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The ‘981 Patent discloses the preferable amount of unsaturated carboxylic acid is “from about 5[%] to about 15% by weight.” (‘981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the ‘981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>	Ionomer Type	Blend Ratio	Sodium- Surlyn 8940	75%	Zinc- Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium- Surlyn 8940	75%						
Zinc- Surlyn 9910	25%						
<p>having a modulus of from about 15,000 to about 70,000 psi; and</p>	<p>“The standard resins have a flexural modulus in the range of about 30,000 to about 55,000 psi as measured by ATM Method D-790. (Standard resins are referred to as “hard Surlins” in U.S. Patent No. 4,884,814.)” (col. 5, line 66-col. 6, line 1.)</p> <p>“Specific standard Surlyn resins which can be used in the inner layer include 8940 (sodium), 9910 (zinc) ...” (col. 6,</p>						

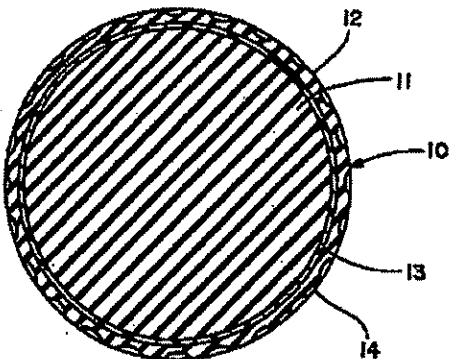
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	<p>lines 6-7.)</p> <p>The composition of the inner cover layer is described in Table 6.</p> <p style="text-align: center;">TABLE 6</p> <table> <tr> <th colspan="2">Composition of Inner Layer of Cover (Parts by Weight)</th></tr> <tr> <th>Isomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Medium- Guriya 8940</td><td>75%</td></tr> <tr> <td>Zinc- Guriya 9910</td><td>25%</td></tr> </table> <p>(Proudfit, col. 8, ll. 22-30.)</p>	Composition of Inner Layer of Cover (Parts by Weight)		Isomer Type	Blend Ratio	Medium- Guriya 8940	75%	Zinc- Guriya 9910	25%										
Composition of Inner Layer of Cover (Parts by Weight)																			
Isomer Type	Blend Ratio																		
Medium- Guriya 8940	75%																		
Zinc- Guriya 9910	25%																		
an outer cover layer having	<p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.</p>																		
a Shore D hardness of about 64 or less	<p>"FIG 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24.)</p> <p>"... an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17.) An example of this blend is disclose in Table 7 reproduced below.</p> <p style="text-align: center;">TABLE 7</p> <table> <tr> <th colspan="2">Composition of Outer Layer (Parts by Weight)</th></tr> <tr> <td>Trans PolyIsoprene (TP-351)</td><td>60.00</td></tr> <tr> <td>Polybutadiene</td><td>40.00</td></tr> <tr> <td>Zinc Oxide</td><td>3.00</td></tr> <tr> <td>Titanium Dioxide</td><td>17.00</td></tr> <tr> <td>Ultramarine Blue color</td><td>.50</td></tr> <tr> <td>Eine DiAcrylate</td><td>31.00</td></tr> <tr> <td>Peroxide (Varon 230 XL)</td><td>2.50</td></tr> <tr> <td>Total</td><td>160.00</td></tr> </table> <p>Note that Trans PolyIsoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert in paragraph 7, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A to the Rule 132 Declaration and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore D hardness of less than 64.</p>	Composition of Outer Layer (Parts by Weight)		Trans PolyIsoprene (TP-351)	60.00	Polybutadiene	40.00	Zinc Oxide	3.00	Titanium Dioxide	17.00	Ultramarine Blue color	.50	Eine DiAcrylate	31.00	Peroxide (Varon 230 XL)	2.50	Total	160.00
Composition of Outer Layer (Parts by Weight)																			
Trans PolyIsoprene (TP-351)	60.00																		
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Titanium Dioxide	17.00																		
Ultramarine Blue color	.50																		
Eine DiAcrylate	31.00																		
Peroxide (Varon 230 XL)	2.50																		
Total	160.00																		

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disposed about said inner cover layer and defining a plurality of dimples to form a multi-layer golf ball,	<p>Figure 1 of Proudfit shows dimples formed on the outer surface</p> 
said outer cover layer comprising polyurethane based material.	<p>"... an outer layer of soft material such as balata or a blend of balata and other elastomers." (col. 5, lines 15-17.) Also, see below.</p>

As pointed out in the request on pages 45 and 46:

While Proudfit may not expressly disclose the use of polyurethane as an outer cover material, it would have been obvious given that "[t]he patent literature is replete with proposed cover formulations seeking to improve upon the balata and ionomer covers [including] [p]olyurethane" (See Molitor '751, col. 2, lines 9-12.) Soft polyurethane materials had been known to be a substitute for balata covers for decades prior to the filing of the '130 patent.

For example, Molitor '637 discloses the use of polyurethane material as a soft polymeric material that may be used as an outer cover layer of a golf ball. (See Molitor '637, col. 5, lines 33-41; col. 18, Examples 16 and 17.) One exemplary polyurethane material used by Molitor as an outer cover material includes Estane 58133.

As was readily appreciated by those skilled in the art—including the inventor of the '130 patent—the types of materials used in a golf ball are not as critical to a golf ball's playability as are the mechanical properties of those materials. (See Exhibit G at 334.) The Estane 58133 is a relatively soft material and has a Shore D hardness of 55 and is also a low flexural modulus material having a modulus of about 25,000 psi. (See Exhibit J.) Proudfit's outer cover layer is also relatively soft and has a flexural modulus between 20,000 and 25,000 psi. (Proudfit, col. 6, lines 28-31.) Due to the similarities between these two materials, the ordinarily skilled artisan would have recognized the substitutability of these two materials as well as the benefits of using polyurethane as an outer cover material.

On page 46, the request concludes:

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It would have been obvious to one of ordinary skill in the art at the time of invention to modify the balata-based outer cover layer of Proudfit to include the Estane polyurethane outer cover layer material of Molitor '637 because such was a well known substitute to balata and gives a number of advantages over balata as would have been readily appreciated by those skilled in the art. These advantages include: (1) improved processability; (2) improved durability when compared to balata; (3) cost-effectiveness when compared to balata; and (4) having a good "click" and "feel." (See *supra* [regarding the what "click" and "feel" mean to a golfer]) All of this would have led one of ordinary skill in the art to replace the soft balata outer cover layer of Proudfit with the soft polyurethane outer cover layer of Molitor '637 at the time of the alleged invention.

This rejection of claim 4 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 26: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 5: Patent Owner's Argument," *supra*.

Ground 26: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 5: Third Party Requester's Comments," *supra*.

Ground 26: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor

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'637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #27.

The requester submits on pages 46-48 that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 4	Proudfit
A multi-layer golf ball comprising:	<p>"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)</p>
a spherical core;	<div> </div> <p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 [in the shape of a sphere] and a cover 12 which comprises a relatively hard inner layer 13 of one or</p>

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	<p>more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>						
an inner cover layer having	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p>						
Shore D hardness of about 60 or more molded over said spherical core,	<p><u>Exhibit I:</u> Surlyn® 8940 has a Shore D hardness of 65; Surlyn® 9910 has a Shore D hardness of 64.</p> <p>Therefore, this cover blend has a hardness of 60 or more. (See Decl. of Edmund A. Hebert at ¶¶ 8-9.)</p> <p>"The inner layer can be molded in one of two methods: 1. Injection molded over the core in a manner which is conventionally used to injection mold ionomers over a solid core. 2. Injection mold halfshells, place halfshells over the core, compression mold the inner cover over the core." (Proudfit, col. 8, lines 32-38.)</p> <p>See below with respect to Shore D hardness.</p>						
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"The composition of the inner cover layer is described in Table 6."</p> <table border="1"> <caption>TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</caption> <thead> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium- Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc- Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins</p>	Ionomer Type	Blend Ratio	Sodium- Surlyn 8940	75%	Zinc- Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium- Surlyn 8940	75%						
Zinc- Surlyn 9910	25%						

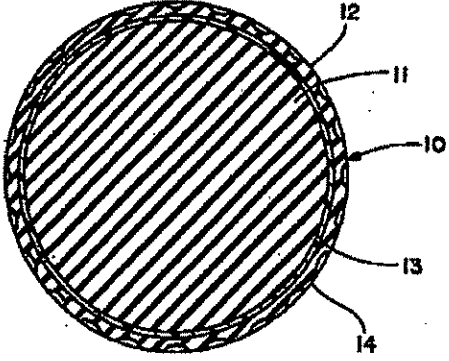
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	<p>containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>						
having a modulus of from about 15,000 to about 70,000 psi; and	<p>"The standard resins have a flexural modulus in the range of about 30,000 to about 55,000 psi as measured by ATM Method D-790. (Standard resins are referred to as "hard Surlyns" in U.S. Patent No. 4,884,814.)" (col. 5, line 66-col. 6, line 1.)</p> <p>"Specific standard Surlyn resins which can be used in the inner layer include 8940 (sodium), 9910 (zinc)" (col. 6, lines 6-7.)</p> <p>The composition of the inner cover layer is described in Table 6.</p> <table border="1"> <caption>TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</caption> <thead> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium- Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc- Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30.)</p>	Ionomer Type	Blend Ratio	Sodium- Surlyn 8940	75%	Zinc- Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium- Surlyn 8940	75%						
Zinc- Surlyn 9910	25%						
an outer cover layer having	<p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.</p>						

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<p>a Shore D hardness of about 64 or less</p>	<p>"FIG 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24.)</p> <p>"... an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17.) An example of this blend is disclose in Table 7 reproduced below.</p> <div> <p style="text-align: center;">TABLE 7 Composition of Outer Layer (Parts by Weight)</p> <table> <tr> <td>Trans Polyisoprene (TP-301)</td><td>60.00</td></tr> <tr> <td>Polybutadiene</td><td>40.00</td></tr> <tr> <td>Zinc Oxide</td><td>5.00</td></tr> <tr> <td>Titanium Dioxide</td><td>17.00</td></tr> <tr> <td>Ultramarine Blue color</td><td>.50</td></tr> <tr> <td>Ethyl Methacrylate</td><td>31.00</td></tr> <tr> <td>Peroxide (Varma 250 XL)</td><td>1.50</td></tr> <tr> <td>Total</td><td>160.00</td></tr> </table> </div> <p>Note that Trans Polyisoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert in paragraph 7, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A to the Rule 132 Declaration and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore D hardness of less than 64.</p>	Trans Polyisoprene (TP-301)	60.00	Polybutadiene	40.00	Zinc Oxide	5.00	Titanium Dioxide	17.00	Ultramarine Blue color	.50	Ethyl Methacrylate	31.00	Peroxide (Varma 250 XL)	1.50	Total	160.00
Trans Polyisoprene (TP-301)	60.00																
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Ultramarine Blue color	.50																
Ethyl Methacrylate	31.00																
Peroxide (Varma 250 XL)	1.50																
Total	160.00																
<p>disposed about said inner cover layer and defining a plurality of dimples to form a multi-layer golf ball,</p>	<p>Figure 1 of Proudfit shows dimples formed on the outer surface</p> 																
<p>said outer cover layer comprising polyurethane based material.</p>	<p>"... an outer layer of soft material such as balata or a blend of balata and other elastomers." (col. 5, lines 15-17.) Also, see below.</p>																

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As pointed out in the request on pages 46 and 47:

... Proudfit teaches a golf ball having a two-piece cover including a hard, ionomeric inner cover layer and a soft balata outer cover layer. While Proudfit may not disclose the use of a polyurethane material as the outer cover layer of a golf ball, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the soft balata outer cover layer of Proudfit to include the soft polyurethane material taught by Wu. Wu teaches that: "The problem with SURLYN®-covered golf balls, however, is that they lack the "click" and "feel" which golfers had become accustomed to with balata. "Click" is the sound when the ball is hit by a golf club and "feel" is the overall sensation imparted to the golfer when the ball is hit. It has been proposed to employ polyurethane as a cover stock for golf balls because, like SURLYN®, it has a relatively low price compared to balata and provides superior cut resistance over balata. However, unlike SURLYN®-covered golf balls, polyurethane-covered golf balls can be made to have the "click" and "feel" of balata. (Wu at col. 1, lines 36-46.) As the inventor of the '130 patent had indicated in a 1994 publication, golf ball designers understood that the mechanical properties of the layers impacted the performance of the golf ball more than the materials themselves. (Exhibit G at 334.) Additionally, Wu's polyurethane material inherently has a flexural modulus of about 23,000 psi as measured in accordance with ASTM standards. (Decl. of Jeff Dalton at ¶ 7.) Proudfit's outer cover layer material has a flexural modulus of between about 20,000 and 25,000 psi. (Proudfit, col. 6, lines 28-31.) Thus, one of ordinary skill in the art would have appreciated that using Wu's polyurethane as Proudfit's outer cover layer would have provided similar playability characteristics as well as numerous advantages including, for example, durability.

Based on Wu's teachings, one of ordinary skill in the art would have recognized the substitutability of soft polyurethane for soft balata-based materials and the advantages of making such a substitution. These advantages include (1) low price compared to balata; (2) better cut resistance when compared to balata; and (3) a "click" and "feel" that is similar to balata. Moreover, the replacing the balata-material taught by Proudfit would have been obvious to those skilled in the art prior to November 9, 1995 because before that time, the Titleist Professional™ golf ball, which had used Wu's polyurethane material, had replaced balata-covered balls as the market leader. (See Exhibit C; see also Decl. of Jeffery L. Dalton at ¶¶ 3-4.)

On page 48 the request concludes with:

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the alleged invention to modify Proudfit's golf ball by replacing the soft balata outer cover layer with an outer cover layer made of soft polyurethane material because polyurethane provides numerous advantages over balata while exhibiting the "click" and "feel" of balata.

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This rejection of claim 4 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 27: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 6: Patent Owner's Argument," *supra*.

Ground 27: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 6: Third Party Requester's Comments," *supra*.

Ground 27: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #28.

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The requester submits on pages 48-49 that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 4	Proudfit
A multi-layer golf ball comprising:	<p>"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)</p>
a spherical core;	<div> </div> <p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 [in the shape of a sphere] and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball."</p>

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	(Proudfit, col. 7, ll. 51-55)						
an inner cover layer having	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p>						
Shore D hardness of about 60 or more molded over said spherical core,	<p><u>Exhibit I:</u> Surlyn® 8940 has a Shore D hardness of 65; Surlyn® 9910 has a Shore D hardness of 64.</p> <p>Therefore, this cover blend has a hardness of 60 or more. (See Decl. of Edmund A. Hebert at ¶¶ 8-9.)</p> <p>"The inner layer can be molded in one of two methods: 1. Injection molded over the core in a manner which is conventionally used to injection mold ionomers over a solid core. 2. Injection mold halfshells, place halfshells over the core, compression mold the inner cover over the core." (Proudfit, col. 8, lines 32-38.)</p> <p>See below with respect to Shore D hardness.</p>						
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"The composition of the inner cover layer is described in Table 6."</p> <table border="1"> <caption>TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</caption> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Sodium- Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc- Surlyn 9910</td><td>25%</td></tr> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit,</p>	Ionomer Type	Blend Ratio	Sodium- Surlyn 8940	75%	Zinc- Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium- Surlyn 8940	75%						
Zinc- Surlyn 9910	25%						

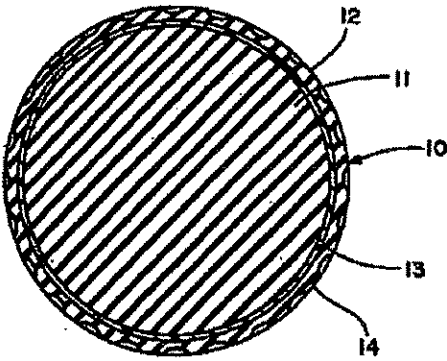
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	col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.						
having a modulus of from about 15,000 to about 70,000 psi; and	<p>"The standard resins have a flexural modulus in the range of about 30,000 to about 55,000 psi as measured by ATM Method D-790. (Standard resins are referred to as "hard Surlyns" in U.S. Patent No. 4,884,814.)" (col. 5, line 66-col. 6, line 1.)</p> <p>"Specific standard Surlyn resins which can be used in the inner layer include 8940 (sodium), 9910 (zinc)" (col. 6, lines 6-7.)</p> <p>The composition of the inner cover layer is described in Table 6.</p> <div style="text-align: center;"> <p>TABLE 6</p> <p>Composition of Inner Layer of Cover (Parts by Weight)</p> <table> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Sodium- Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc- Surlyn 9910</td><td>25%</td></tr> </table> </div> <p>(Proudfit, col. 8, ll. 22-30.)</p>	Ionomer Type	Blend Ratio	Sodium- Surlyn 8940	75%	Zinc- Surlyn 9910	25%
Ionomer Type	Blend Ratio						
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an outer cover layer having	"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.						
a Shore D hardness of about 64 or less	<p>"FIG 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24.)</p> <p>"... an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-</p>						

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	<p>17.) An example of this blend is disclosed in Table 7 reproduced below.</p> <table border="1"> <caption>TABLE 7</caption> <thead> <tr> <th colspan="2">Composition of Outer Layer (Parts by Weight)</th></tr> </thead> <tbody> <tr> <td>Trans Polyisoprene (TP-301)</td><td>60.00</td></tr> <tr> <td>Polybutadiene</td><td>40.00</td></tr> <tr> <td>Zinc Oxide</td><td>1.00</td></tr> <tr> <td>Titanium Dioxide</td><td>17.00</td></tr> <tr> <td>Ultramarine Blue color</td><td>.50</td></tr> <tr> <td>Zinc DiAcrylate</td><td>31.00</td></tr> <tr> <td>Peroxide (Varox 250 XL)</td><td>1.50</td></tr> <tr> <td>Total</td><td>160.00</td></tr> </tbody> </table> <p>Note that Trans Polyisoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert in paragraph 7, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A to the Rule 132 Declaration and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore D hardness of less than 64.</p>	Composition of Outer Layer (Parts by Weight)		Trans Polyisoprene (TP-301)	60.00	Polybutadiene	40.00	Zinc Oxide	1.00	Titanium Dioxide	17.00	Ultramarine Blue color	.50	Zinc DiAcrylate	31.00	Peroxide (Varox 250 XL)	1.50	Total	160.00
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Total	160.00																		
<p>disposed about said inner cover layer and defining a plurality of dimples to form a multi-layer golf ball,</p>	<p>Figure 1 of Proudfit shows dimples formed on the outer surface</p> 																		
<p>said outer cover layer comprising polyurethane based material.</p>	<p>"... an outer layer of soft material such as balata or a blend of balata and other elastomers." (col. 5, lines 15-17.) Also, see below.</p>																		

As pointed out in the request on pages 48 and 49:

...Proudfit teaches a golf ball having a two-piece cover including a hard, ionomeric inner cover layer and a soft balata outer cover layer. While Proudfit may not disclose the use of a polyurethane material as the outer cover layer for a golf ball, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Proudfit's

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golf ball by replacing the soft balata outer cover layer with the soft polyurethane outer cover layer taught by Molitor '751.

Molitor '751 teaches that: It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76. The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a thermoplastic urethane having a shore A hardness less than 95 and (2) an ionomer having a shore D hardness greater than 55. (Molitor '751, col. 2, lines 33-49.) In explaining what a "two-piece" golf ball is, the Molitor '751 patent explains that: The phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and Other balls having non-wound cores. (Molitor '751, col. 2, lines 7-12.)

Proudfit teaches a "two-piece" golf ball that fits within this definition. Molitor '751 explains that the advantages of using a cover layer including a soft polyurethane material on a two-piece golf ball, such as the golf ball of Proudfit, include "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, lines 61-68.)

Molitor expresses the hardness of the cover material as a Shore C hardness of less than 85, preferably 70 to 85 and most preferably 72 to 76. (Molitor '751, col. 4, lines 21-25.) Based on Callaway's own measurements, a Shore C hardness of 73 is equal to a Shore D hardness of 47. (See U.S. Patent No. 6,905,648, Table 19 (Exhibit L.) A cover material having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

On page 49 the request concludes:

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to replace the soft balata outer cover layer of Proudfit with the soft outer cover layer including a soft polyurethane material as taught by Molitor '751 to provide golf balls that have "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, lines 61-68.)

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This rejection of claim 4 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 28: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 7: Patent Owner's Argument," *supra*.

Ground 28: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 7: Third Party Requester's Comments," *supra*.

Ground 28: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

Re. Claim 5

Proposed Third Party Requester Rejection: Ground #29.

The requester submits on pages 50-51 that claim 5 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

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This rejection is adopted in this office action.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 5	Nesbitt
A golf ball according to claim 4, wherein	See above.
said inner cover layer has a thickness of about 0.100 to about 0.010 inches and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.010 to about 0.070 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
said golf ball having an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.) "This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)

This rejection of claim 5 based on Nesbitt incorporating my reference Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 29: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

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Ground 29: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

Ground 29: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #30.

In the alternative, the requester submits on page 51 that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 5	Nesbitt
A golf ball according to claim 4, wherein	See above.
said inner cover layer has a thickness of about 0.100 to about 0.010 inches and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a	"The thickness of the outer layer or cover 16 of soft, low

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thickness of about 0.010 to about 0.070 inches,	flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
said golf ball having an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.) "This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)

This rejection of claim 5 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 30: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 30: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 2: Third Party Requester's Comments."

Ground 30: Examiner's Response to the Argument and Comments

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Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #31.

The requester submits on page 51 of the request that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 5	Nesbitt
A golf ball according to claim 4, wherein	See above.
said inner cover layer has a thickness of about 0.100 to about 0.010 inches and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.010 to about 0.070 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
said golf ball having an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.) "This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf

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	ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)
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This rejection of claim 5 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 31: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 3: Patent Owner's Argument," *supra*.

Ground 31: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 3: Third Party Requester's Comments," *supra*.

Ground 31: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #32.

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The requester submits on page 51 of the request that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 5	Nesbitt
A golf ball according to claim 4, wherein	See above.
said inner cover layer has a thickness of about 0.100 to about 0.010 inches and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.010 to about 0.070 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
said golf ball having an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.) "This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)

This rejection of claim 5 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

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Ground 32: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 4: Patent Owner's Argument," *supra*.

Ground 32: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 4: Third Party Requester's Comments," *supra*.

Ground 32: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #33.

The requester submits on pages 51-52 that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

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Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 5	Proudfit
A golf ball according to claim 4, wherein	See above.
said inner cover layer has a thickness of about 0.100 to about 0.010 inches and	"The thickness of the inner layer can be within the range of about 0.0250 to 0.2875 inch to provide a total diameter of the inner layer and core within the range of about 1.550 to 1.590 inch." (Proudfit, col. 7, lines 37-40.) "The preferred dimensions are ... an inner layer thickness of 0.037 inch" (Proudfit, col. 7, lines 43-44.)
said outer cover layer has a thickness of about 0.010 to about 0.070 inches,	"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch" (Proudfit, col. 7, lines 40-46.)
said golf ball having an overall diameter of 1.680 inches or more.	"The preferred dimensions are a core diameter of 1.500 inch, and inner layer thickness of 0.037 inch (inner layer diameter of 1.575 inch), and an outer layer thickness of 0.0525 inch (total ball diameter of 1.680 inch)." (Proudfit, col. 7, lines 43-47.)

This rejection of claim 5 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 33: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 5: Patent Owner's Argument," *supra*.

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Ground 33: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 5: Third Party Requester's Comments," *supra*.

Ground 33: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #34.

The requester submits on pages 51-52 that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 5	Proudfit
A golf ball according to claim 4, wherein	See above.
said inner cover layer has a	"The thickness of the inner layer can be within the range

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thickness of about 0.100 to about 0.010 inches and	of about 0.0250 to 0.2875 inch to provide a total diameter of the inner layer and core within the range of about 1.550 to 1.590 inch." (Proudfit, col. 7, lines 37-40.) "The preferred dimensions are ... an inner layer thickness of 0.037 inch" (Proudfit, col. 7, lines 43-44.)
said outer cover layer has a thickness of about 0.010 to about 0.070 inches,	"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch" (Proudfit, col. 7, lines 40-46.)
said golf ball having an overall diameter of 1.680 inches or more.	"The preferred dimensions are a core diameter of 1.500 inch, and inner layer thickness of 0.037 inch (inner layer diameter of 1.575 inch), and an outer layer thickness of 0.0525 inch (total ball diameter of 1.680 inch)." (Proudfit, col. 7, lines 43-47.)

This rejection of claim 5 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 34: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 6: Patent Owner's Argument," *supra*.

Ground 34: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 6: Third Party Requester's Comments," *supra*.

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Ground 34: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #35.

The requester submits on pages 51-52 that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 5	Proudfit
A golf ball according to claim 4, wherein	See above.
said inner cover layer has a thickness of about 0.100 to about 0.010 inches and	"The thickness of the inner layer can be within the range of about 0.0250 to 0.2875 inch to provide a total diameter of the inner layer and core within the range of about 1.550 to 1.590 inch." (Proudfit, col. 7, lines 37-40.) "The preferred dimensions are ... an inner layer thickness of 0.037 inch" (Proudfit, col. 7, lines 43-44.)
said outer cover layer has a	"The thickness of the outer layer can be within the range

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thickness of about 0.010 to about 0.070 inches,	of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch" (Proudfit, col. 7, lines 40-46.)
said golf ball having an overall diameter of 1.680 inches or more.	"The preferred dimensions are a core diameter of 1.500 inch, and inner layer thickness of 0.037 inch (inner layer diameter of 1.575 inch), and an outer layer thickness of 0.0525 inch (total ball diameter of 1.680 inch)." (Proudfit, col. 7, lines 43-47.)

This rejection of claim 5 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 35: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 7: Patent Owner's Argument," *supra*.

Ground 35: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 7: Third Party Requester's Comments," *supra*.

Ground 35: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor

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'751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

Re. Claim 6

Proposed Third Party Requester Rejection: Ground #36.

The requester submits on pages 52-53 that claim 6 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 6	Nesbitt (Molitor '637 incorporated by reference)
A golf ball according to claim 4 wherein	See above.
said inner cover layer has a thickness of about 0.050 inches and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.055 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
said golf ball having an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.) "This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural

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modulus resin" (Nesbitt, col. 3, lines 34-38.)

This rejection of claim 6 based on Nesbitt incorporating by reference Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 36: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 36: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

Ground 36: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #37.

In the alternative, the requester submits on pages 52-53 that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Pat. No. 4,274,637 (Molitor '637).

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Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 6	Nesbitt
A golf ball according to claim 4 wherein	See above.
said inner cover layer has a thickness of about 0.050 inches and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.055 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
said golf ball having an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.) "This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)

This rejection of claim 6 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 37: Patent Owner's Argument

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Patent Owner argues that the minimum thickness for the outer layer of the cover of Molitor '637 is 0.060 inches while this claim requires a thickness of 0.055 for this layer (Patent Owner's Response at middle of page 17).

Ground 37: Third Party Requester's Comments

Third Party Requester counter argues that Nesbitt discloses a range of 0.020 to 0.100 inches for the thickness of the outer cover of a golf ball (Nesbitt at col. 3, lines 22-25). The holding in *KRS* would dictate that one of ordinary skill would know to use the material of Molitor '637, polyurethane, with the thickness of Nesbitt (Third Party Requester's Comments at page 20-21).

Ground 37: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester, and the rejection of claim 6 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. Since Nesbitt references the Molitor '637 patent, one of ordinary skill would logically look at its complete disclosure which includes the use of polyurethane as an outer cover. Using the thickness values of Nesbitt with polyurethane would be obvious because Nesbitt states that "the thickness of the inner layer . . . and the thickness of outer layer . . . may be varied to secure the advantages herein mentioned" at col. 3, lines 16-19. The advantages Nesbitt wishes to achieve are both distance and feel in one golf ball (Nesbitt at col. 2, lines 1-9).

Proposed Third Party Requester Rejection: Ground #38.

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In the alternative, the requester submits on page 53 that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 6	Nesbitt
A golf ball according to claim 4 wherein	See above.
said inner cover layer has a thickness of about 0.050 inches and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.055 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
said golf ball having an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.) "This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)

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This rejection of claim 6 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 38: Patent Owner's Argument

Patent Owner does not specifically argue this rejection. The arguments are the same as those at "Ground 3: Patent Owner's Argument," *supra*.

Ground 38: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection. The counter arguments are the same as those at "Ground 3: Third Party Requester's Comments," *supra*.

Ground 38: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 6 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #39.

In the alternative, the requester submits on pages 52-53 that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,674,751 (Molitor '751).

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Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 6	Nesbitt
A golf ball according to claim 4 wherein	See above.
said inner cover layer has a thickness of about 0.050 inches and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
said outer cover layer has a thickness of about 0.055 inches,	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such as Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, lines 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, lines 39-40.)
said golf ball having an overall diameter of 1.680 inches or more.	"According to the United States Golf Association Rules, the minimum diameter prescribed for a golf ball is 1.680 inches" (Nesbitt, col. 2, lines 50-52.) "This center or core 12 and inner layer 14 of hard resinous material in the form of a sphere is then remolded into a dimpled golf ball of a diameter of 1.680 inches minimum with an outer or cover layer 16 of a soft, low flexural modulus resin" (Nesbitt, col. 3, lines 34-38.)

This rejection of claim 6 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 39: Patent Owner's Argument

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Patent Owner does not specifically argue this rejection.

Ground 39: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 39: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 6 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejections: Ground #40-42.

The requester submits on pages 53-54 that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637); Wu, U.S. Pat. No. 5,334,673 (Wu); or Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

These rejections are not adopted for the reasons given in Order Granting Reexamination, dated 04/07/2006, at paragraph #23, which is incorporated herein.

Re. Claim 7

Proposed Third Party Requester Rejection: Ground #43.

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The requester submits on pages 56-59 that claim 7 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 7	Nesbitt (incorporating by reference Molitor '637)
A multi-layer golf ball comprising:	"The disclosure embraces a golf ball and method of making same...." (Nesbitt, Abstract; FIGS 1 & 2.)
a spherical core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere." (Nesbitt, col. 2, lines 31-34.)
an inner cover layer molded over said spherical core to form a spherical intermediate ball,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, lines 31-34.)
said inner cover layer having a Shore D hardness of at least 60,	<p>"[I]nner cover 14 of molded hard, highly flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I. DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p>"[A] center or core 12 ... is molded with a layer of hard, high modulus Surlyn resin, such as Surlyn type 1605..." (Nesbitt, col. 3, lines 27-29.)</p> <p><u>Exhibit I</u>: DuPont Surlyn Product Information: Surlyn® 8940 (formerly 1605 (see '293 patent, col. 2, lines 54-55)) has a Shore D hardness of 65.</p>
said inner cover layer comprising an ionomeric resin having no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid	"Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers

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and	<p>14 [inner] and 16 [outer] for the golf ball of this invention.” (Nesbitt, col. 3, ll. 56-61).</p> <p>Molitor ‘637: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor ‘637, col. 14, l. 22 to col. 16, l. 34).</p> <p>Per the ‘293 Patent: “Type 1605 Surlyn® (Surlyn® 8940) is a sodium ion based low acid (less than or equal to 15 weight percent methacrylic acid) ionomer resin” (‘293 patent, col. 2, lines 54-58.)</p>
having a modulus of from about 15,000 to about 70,000 psi; and	See below.
a dimpled outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball,	<p>“An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14” (Nesbitt, col. 2, lines 43-47.)</p> <p>“[T]he outer layer or cover 16 being of dimpled configuration” (Nesbitt, col. 2, lines 48-49; Fig. 2.)</p>
said outer cover having a Shore D hardness of 64 or less,	<p>Nesbitt: “Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention.” (Nesbitt, col. 3, ll. 54-60).</p> <p>Molitor ‘637: Teaches the use of ESTANE 58133 in Examples 16 and 17. (Molitor ‘637, col. 18, ll. 32-60)</p> <p>ESTANE 58133 has a Shore D hardness of 55, see <u>Exhibit J</u> (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>Also see below why this cover material has inherently a Shore D hardness of 55.</p>
said outer layer comprising a polyurethane,	Nesbitt: “Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No.

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	<p>4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 and 16." (Nesbitt, col. 3, lines 54-60.)</p> <p><u>Molitor '637:</u> Teaches cover materials including "polyurethanes such as are prepared from polyols and organic polyisocyanates"; specifically Estane 58133 thermoplastic polyurethane. (Molitor '637, col. 5, lines 39-41; col. 18, lines 31-59 (examples 16 and 17).)</p> <p><u>Exhibit J:</u> ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>
said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi.	<p><u>Exhibit J:</u> Estane 58133 Product Information: Estane 58133 has a modulus of 25,000 psi.</p> <p>Nesbitt: Nesbitt's exemplary outer cover layer is made of Surlyn® 1855, which has the same hardness as Estane 58133 and has a flexural modulus of 14,000 psi.</p>

As mentioned above, Nesbitt incorporating by reference Molitor '637 describes an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's

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first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

Exhibit J is a product information sheet for Estane 58133 a material that is taught to be used as an outer layer. Exhibit J teaches that Estane 58133 has a flexural modulus of 25,000 psi.

This rejection of claim 7 based on Nesbitt incorporating by reference Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 43: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 43: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

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Ground 43: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #44.

In the alternative, the requester submits on pages 56-59 that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 7	Nesbitt mentioning Molitor '637
A multi-layer golf ball comprising:	"The disclosure embraces a golf ball and method of making same...." (Nesbitt, Abstract; FIGS 1 & 2.)
a spherical core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere." (Nesbitt, col. 2, lines 31-34.)
an inner cover layer molded over said spherical core to form a spherical intermediate ball,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, lines 31-34.)
said inner cover layer having a	"[I]nner cover 14 of molded hard, highly flexural

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Shore D hardness of at least 60,	<p>modulus resinous material such as type 1605 Surlyn® marketed by E.I. DuPont de Nemours.” (Nesbitt, col. 2, lines 36-38.)</p> <p>“[A] center or core 12 ... is molded with a layer of hard, high modulus Surlyn resin, such as Surlyn type 1605...” (Nesbitt, col. 3, lines 27-29.)</p> <p><u>Exhibit I</u>: DuPont Surlyn Product Information: Surlyn® 8940 (formerly 1605 (see '293 patent, col. 2, lines 54-55)) has a Shore D hardness of 65.</p>
said inner cover layer comprising an ionomeric resin having no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>“Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 [inner] and 16 [outer] for the golf ball of this invention.” (Nesbitt, col. 3, ll. 56-61).</p> <p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p> <p>Per the '293 Patent: “Type 1605 Surlyn® (Surlyn® 8940) is a sodium ion based low acid (less than or equal to 15 weight percent methacrylic acid) ionomer resin” ('293 patent, col. 2, lines 54-58.)</p>
having a modulus of from about 15,000 to about 70,000 psi; and	See below.
a dimpled outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball,	<p>“An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14” (Nesbitt, col. 2, lines 43-47.)</p> <p>“[T]he outer layer or cover 16 being of dimpled configuration” (Nesbitt, col. 2, lines 48-49; Fig. 2.)</p>
said outer cover having a Shore D hardness of 64 or less,	<u>Nesbitt</u> : “Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable

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	<p>compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention.” (Nesbitt, col. 3, ll. 54-60).</p> <p><u>Molitor '637</u>: Teaches the use of ESTANE 58133 in Examples 16 and 17. (Molitor '637, col. 18, ll. 32-60)</p> <p>ESTANE 58133 has a Shore D hardness of 55, see <u>Exhibit J</u> (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>Also see below why this cover material has inherently a Shore D hardness of 55.</p>
said outer layer comprising a polyurethane,	<p><u>Nesbitt</u>: “Reference is made to the application Set. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 and 16.” (Nesbitt, col. 3, lines 54-60.)</p> <p><u>Molitor '637</u>: Teaches cover materials including “polyurethanes such as are prepared from polyols and organic polyisocyanates”; specifically Estane 58133 thermoplastic polyurethane. (Molitor '637, col. 5, lines 39-41; col. 18, lines 31-59 (examples 16 and 17).)</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>
said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi.	<p><u>Exhibit J</u>: Estane 58133 Product Information: Estane 58133 has a modulus of 25,000 psi.</p> <p><u>Nesbitt</u>: Nesbitt's exemplary outer cover layer is made of Surlyn® 1855, which has the same hardness as Estane 58133 and has a flexural modulus of 14,000 psi.</p>

As mentioned above, Nesbitt references Molitor '637 as describing an number of ... compositions suitable for the inner cover layer 14. Of particular interest in this case are

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Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

Exhibit J is a product information sheet for Estane 58133 a material that is taught to be used as an outer layer. Exhibit J teaches that Estane 58133 has a flexural modulus of 25,000 psi.

This rejection of claim 7 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

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Ground 44: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 44: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 44: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #45.

The requester submits on pages 59-61 of the request that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Wu discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which

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is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 7	Nesbitt mentioning Molitor '637
A multi-layer golf ball comprising:	"The disclosure embraces a golf ball and method of making same...." (Nesbitt, Abstract; FIGS 1 & 2.)
a spherical core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere." (Nesbitt, col. 2, lines 31-34.)
an inner cover layer molded over said spherical core to form a spherical intermediate ball,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, lines 31-34.)
said inner cover layer having a Shore D hardness of at least 60,	<p>"[I]nner cover 14 of molded hard, highly flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I. DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p>"[A] center or core 12 ... is molded with a layer of hard, high modulus Surlyn resin, such as Surlyn type 1605..." (Nesbitt, col. 3, lines 27-29.)</p> <p><u>Exhibit I: DuPont Surlyn Product Information: Surlyn® 8940 (formerly 1605 (see '293 patent, col. 2, lines 54-55)) has a Shore D hardness of 65.</u></p>
said inner cover layer comprising an ionomeric resin having no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 [inner] and 16 [outer] for the golf ball of this invention." (Nesbitt, col. 3, ll. 56-61).</p> <p><u>Molitor '637: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: -- SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</u></p>

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	Per the '293 Patent: "Type 1605 Surlyn® (Surlyn® 8940) is a sodium ion based low acid (less than or equal to 15 weight percent methacrylic acid) ionomer resin" ('293 patent, col. 2, lines 54-58.)
having a modulus of from about 15,000 to about 70,000 psi; and	See below.
a dimpled outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball,	<p>"An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14" (Nesbitt, col. 2, lines 43-47.)</p> <p>"[T]he outer layer or cover 16 being of dimpled configuration" (Nesbitt, col. 2, lines 48-49; Fig. 2.)</p>
said outer cover having a Shore D hardness of 64 or less,	<p>Nesbitt: "Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p> <p>Molitor '637: Teaches the use of ESTANE 58133 in Examples 16 and 17. (Molitor '637, col. 18, ll. 32-60)</p> <p>ESTANE 58133 has a Shore D hardness of 55, see <u>Exhibit J</u> (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>Also see below why this cover material has inherently a Shore D hardness of 55.</p> <p>Wu: "With polyurethanes made in accordance with the present invention, the degree of cure which has taken place is dependent upon, <i>inter alia</i>, the time, temperature, type of curative, and amount of catalyst used. It has been found that the degree of cure of the cover composition is directly proportional to the hardness of the composition. A hardness of about 10D to 30D, Shore D hardness for the cover stock at the end of the intermediate curing step (i.e. just prior to the final</p>

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	<p>molding step) has been found to be suitable for the present invention, More preferred is a hardness of about 12D to 20D.” (Wu, col. 6, ll. 27-38.)</p> <p>See below for more explanation of how Wu teaches and/or suggests the Shore D hardness of 64 or less limitation explanation.</p>
said outer layer comprising a polyurethane,	<p>Nesbitt: “Reference is made to the application Set. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 and 16.” (Nesbitt, col. 3, lines 54-60.)</p> <p>Molitor '637: Teaches cover materials including “polyurethanes such as are prepared from polyols and organic polyisocyanates”; specifically Estane 58133 thermoplastic polyurethane. (Molitor '637, col. 5, lines 39-41; col. 18, lines 31-59 (examples 16 and 17).)</p> <p>Exhibit J: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p> <p>Wu: “Preferably, a golf ball is made in accordance with the present invention by molding a cover about a core wherein the cover is formed from a polyurethane composition comprising a polyurethane prepolymer and a slow-reacting polyamine curing agent or a difunctional glycol.” (Wu, col. 3, ll. 62-66.)</p>
said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi.	<p>Exhibit J: Estane 58133 Product Information: Estane 58133 has a modulus of 25,000 psi.</p> <p>Nesbitt: Nesbitt's exemplary outer cover layer is made of Surlyn® 1855, which has the same hardness as Estane 58133 and has a flexural modulus of 14,000 psi.</p>

As mentioned above, Nesbitt references Molitor '637 as describing a number of compositions suitable for the inner cover layer 14. Of particular interest in this case are

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Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

As mentioned above, Nesbitt mentioning Molitor '637 teaches the use of particular polyurethane materials for the use as an outer layer. Wu teaches that polyurethane was being used as the outer layer of golf ball *circa* 1993. Wu further teaches in col. 1:36-46 that SURLYN covered golf balls lack the "click" and "feel" of balata which golfers have become accustomed to such sensations and polyurethane covered golf balls can be made to have a similar "click" and

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"feel" of balata. Wu also at least teaches that polyurethanes made according to its invention will have Shore D hardness directly proportional to the degree of cure of the cover; and this Shore D hardness ranges from 10 to 30, preferably 12 to 20 on the Shore D scale, see col. 6:26-38. This teaching of Shore D hardness is directed to an intermediate curing step product prior to the final molding process to finish the golf ball. Exhibit C demonstrates the actual finished golf ball product having the cover layer that Wu teaches within its disclosure. Exhibit C teaches that the golf ball taught therein is covered by the following patents: 4,783,078; 4,846,910; 4,858,923; 4,904,320; 4,915,390; 5,007,594; 5,080,367; 5,133,509; **5,334,673**; and D339,074. The '673 Patent teaches the cover sock of the Exhibit C finished golf ball. Exhibit C teaches that the golf ball taught therein has a cover material made from an "elastomer", having a thickness of .050", and 58 Shore D hardness. All three properties are within the range of mechanical properties of the claim invention (polyurethane is an elastomer, cover layer thickness ranges from 0.010 to 0.070 inches and the Shore D hardness is less than 64). Because it has been admitted by the inventor of the Sullivan '893 patent that the particular chemical properties of the materials (the chemical composition) used in the construction of a golf ball lack criticality as compared to the mechanical properties (the Shore D hardness, flexural modulus, layer thickness) of those compounds used for constructing the different layers (Exhibit G at 334), one of ordinary skill in the art at the time the invention was made would find it obvious to incorporate the teachings of Wu which inherently include the teachings of Shore hardness for the fully cured cover layer as taught in Exhibit C as obvious equivalent materials in order to achieve the same end result of providing a cover layer that has the same "click" and "feel" of a balata cover which the extra durability of an elastomeric material.

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This rejection of claim 7 based on Nesbitt mentioning Molitor '637 in view of Wu as evidenced by Exhibit C was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 45: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 45: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 45: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #46.

The requester submits on pages 61-63 of the request that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '751.

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Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 7	Nesbitt mentioning Molitor '637 with Wu (teaching)
A multi-layer golf ball comprising:	"The disclosure embraces a golf ball and method of making same...." (Nesbitt, Abstract; FIGS 1 & 2.)
a spherical core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere." (Nesbitt, col. 2, lines 31-34.)
an inner cover layer molded over said spherical core to form a spherical intermediate ball,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, lines 31-34.)
said inner cover layer having a Shore D hardness of at least 60,	<p>"[I]nner cover 14 of molded hard, highly flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I. DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p>"[A] center or core 12 ... is molded with a layer of hard, high modulus Surlyn resin, such as Surlyn type 1605..." (Nesbitt, col. 3, lines 27-29.)</p> <p><u>Exhibit I</u>: DuPont Surlyn Product Information: Surlyn® 8940 (formerly 1605 (see '293 patent, col. 2, lines 54-55)) has a Shore D hardness of 65.</p>
said inner cover layer comprising an ionomeric resin having no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	"Reference is made to the application Ser. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 [inner] and 16 [outer] for the golf ball of this invention." (Nesbitt, col. 3, ll. 56-61).

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	<p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p> <p>Per the '293 Patent: "Type 1605 Surlyn® (Surlyn® 8940) is a sodium ion based low acid (less than or equal to 15 weight percent methacrylic acid) ionomer resin" ('293 patent, col. 2, lines 54-58.)</p>
having a modulus of from about 15,000 to about 70,000 psi; and	See below.
a dimpled outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball,	<p>"An outer layer, ply, lamination or cover 16 of comparatively soft, low flexural modulus resinous material ... is then re-molded onto the inner ply or layer 14" (Nesbitt, col. 2, lines 43-47.)</p> <p>"[T]he outer layer or cover 16 being of dimpled configuration" (Nesbitt, col. 2, lines 48-49; Fig. 2.)</p>
said outer cover having a Shore D hardness of 64 or less,	<p><u>Nesbitt</u>: "Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p> <p><u>Molitor '637</u>: Teaches the use of ESTANE 58133 in Examples 16 and 17. (Molitor '637, col. 18, ll. 32-60)</p> <p>ESTANE 58133 has a Shore D hardness of 55, see <u>Exhibit J</u> (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>Also see below why this cover material has inherently a Shore D hardness of 55.</p> <p><u>Wu</u>: "With polyurethanes made in accordance with the present invention, the degree of cure which has taken place is dependent upon, <i>inter alia</i>, the time, temperature, type of curative, and amount of catalyst</p>

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	<p>used. It has been found that the degree of cure of the cover composition is directly proportional to the hardness of the composition. A hardness of about 10D to 30D, Shore D hardness for the cover stock at the end of the intermediate curing step (i.e. just prior to the final molding step) has been found to be suitable for the present invention. More preferred is a hardness of about 12D to 20D." (Wu, col. 6, ll. 27-38.)</p> <p>See below for more explanation of how Wu teaches and/or suggests the Shore D hardness of 64 or less limitation explanation.</p>
said outer layer comprising a polyurethane,	<p>Nesbitt: "Reference is made to the application Set. No. 155,658, of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers 14 and 16." (Nesbitt, col. 3, lines 54-60.)</p> <p>Molitor '637: Teaches cover materials including "polyurethanes such as are prepared from polyols and organic polyisocyanates"; specifically Estane 58133 thermoplastic polyurethane. (Molitor '637, col. 5, lines 39-41; col. 18, lines 31-59 (examples 16 and 17).)</p> <p>Exhibit J: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p> <p>Wu: "Preferably, a golf ball is made in accordance with the present invention by molding a cover about a core wherein the cover is formed from a polyurethane composition comprising a polyurethane prepolymer and a slow-reacting polyamine curing agent or a difunctional glycol." (Wu, col. 3, ll. 62-66.)</p>
said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi.	<p>Exhibit J: Estane 58133 Product Information: Estane 58133 has a modulus of 25,000 psi.</p> <p>Nesbitt: Nesbitt's exemplary outer cover layer is made of Surlyn® 1855, which has the same hardness as Estane 58133 and has a flexural modulus of 14,000 psi.</p>

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As shown above in the claim chart, Nesbitt mentioning Molitor '673 suggests the use of a soft outer cover layer including a polyurethane material. In an analogous golf ball, Molitor '751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core **a cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76.** The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) **a thermoplastic urethane having a shore A hardness less than 95** and (2) **an ionomer having a shore D hardness greater than 55.**

(Molitor '751, col. 2, ll.33-49 (emphasis added)).

Moreover, in explaining what constitutes a two-piece golf ball, Molitor '751 teaches that:

The phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, **but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt,** and other balls have non-wound cores.

(Molitor '751, col. 3, ll. 7-12 (emphasis added)).

As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

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How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art "translates" a Shore C value to a Shore D value is by taking the known Shore hardness values with a given range, in this instance Shore C, for given materials, in this instance polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

As mentioned above, Nesbitt references Molitor '637 as describing an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's

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first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

As stated in the request spanning page 63

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft non-ionomeric polymeric outer cover layer incorporated by Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by Molitor '751 to provide a golf ball that includes "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, ll. 61-68)

Moreover, because it appears that to one of ordinary skill in the art at the time the invention was created that the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

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This rejection of claim 7 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 46: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 46: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 46: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '761 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #47.

The requester submits on pages 63-67 that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

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Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 7	Proudfit
A multi-layer golf ball comprising:	<p>"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)</p>
a spherical core;	<div> </div> <p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 [in the shape of a sphere] and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>
an inner cover layer molded over said spherical core to form a spherical intermediate ball,	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"The inner layer can be molded in one of two methods:</p>

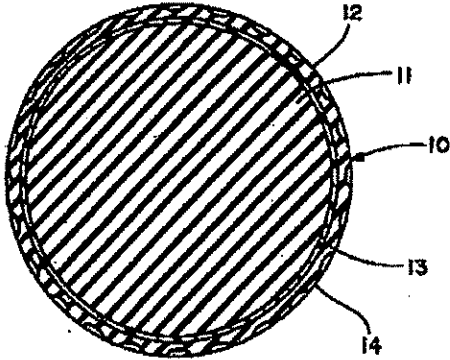
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	<p>1. Injection molded over the core in a manner which is conventionally used to injection mold ionomers over a solid core.</p> <p>2. Injection mold halfshells, place halfshells over the core, compression mold the inner cover over the core." (Proudfit, col. 8, lines 32-38.)</p>								
said inner cover layer having a Shore D hardness of at least 60,	<p>"The composition of the inner cover layer is described in Table 6."</p> <table border="1"> <caption>TABLE 6</caption> <thead> <tr> <th colspan="2">Composition of Inner Layer of Cover (Parts by Weight)</th></tr> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p><u>Exhibit I:</u> Surlyn® 8940 has a Shore D hardness of 65; Surlyn® 9910 has a Shore D hardness of 64.</p> <p>Therefore, this cover blend has a hardness of 60 or more. (See Decl. of Edmund A. Hebert at ¶¶ 8-9.)</p>	Composition of Inner Layer of Cover (Parts by Weight)		Ionomer Type	Blend Ratio	Sodium-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
Composition of Inner Layer of Cover (Parts by Weight)									
Ionomer Type	Blend Ratio								
Sodium-Surlyn 8940	75%								
Zinc-Surlyn 9910	25%								
said inner cover layer comprising an ionomeric resin having no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"The composition of the inner cover layer is described in Table 6."</p> <table border="1"> <caption>TABLE 6</caption> <thead> <tr> <th colspan="2">Composition of Inner Layer of Cover (Parts by Weight)</th></tr> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is</p>	Composition of Inner Layer of Cover (Parts by Weight)		Ionomer Type	Blend Ratio	Sodium-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
Composition of Inner Layer of Cover (Parts by Weight)									
Ionomer Type	Blend Ratio								
Sodium-Surlyn 8940	75%								
Zinc-Surlyn 9910	25%								

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	<p>"from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>						
<p>having a modulus of from about 15,000 to about 70,000 psi; and</p>	<p>"The standard resins have a flexural modulus in the range of about 30,000 to about 55,000 psi as measured by ATM Method D-790. (Standard resins are referred to as "hard Surlyns" in U.S. Patent No. 4,884,814.)" (Proudfit, col. 5, line 66-col. 6, line 1.)</p> <p>"Specific standard Surlyn resins which can be used in the inner layer include 8940 (sodium), 9910 (zinc)" (Proudfit, col. 6, ll. 6-7.)</p> <p>The composition of the inner cover layer is described in Table 6.</p> <table border="1"> <caption>TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</caption> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Sodium-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </table> <p>(Proudfit, col. 8, ll. 22-30.)</p>	Ionomer Type	Blend Ratio	Sodium-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium-Surlyn 8940	75%						
Zinc-Surlyn 9910	25%						
<p>a dimpled outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball,</p>	<p>Figure 1 of Proudfit shows dimples formed on the outer surface</p> 						

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<p>said outer cover having a Shore D hardness of 64 or less,</p>	<p>"FIG 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24.)</p> <p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.</p> <p>An example of this blend is disclose in Table 7 reproduced below.</p> <div> <p style="text-align: center;">TABLE 7 Composition of Outer Layer (Parts by Weight)</p> <table> <tr> <td>Trans Polyisoprene (TP-301)</td><td>60.00</td></tr> <tr> <td>Polybutadiene</td><td>40.00</td></tr> <tr> <td>Zinc Oxide</td><td>5.00</td></tr> <tr> <td>Titanium Dioxide</td><td>11.00</td></tr> <tr> <td>Ultramarine Blue color</td><td>.50</td></tr> <tr> <td>Zinc DiAcrylate</td><td>11.00</td></tr> <tr> <td>Peroxide (Varox 230 XL)</td><td>2.50</td></tr> <tr> <td>Total</td><td>169.00</td></tr> </table> </div> <p>Note that Trans PolyIsoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert in paragraph 7, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A to the Rule 132 Declaration and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore D hardness of less than 64.</p>	Trans Polyisoprene (TP-301)	60.00	Polybutadiene	40.00	Zinc Oxide	5.00	Titanium Dioxide	11.00	Ultramarine Blue color	.50	Zinc DiAcrylate	11.00	Peroxide (Varox 230 XL)	2.50	Total	169.00
Trans Polyisoprene (TP-301)	60.00																
Polybutadiene	40.00																
Zinc Oxide	5.00																
Titanium Dioxide	11.00																
Ultramarine Blue color	.50																
Zinc DiAcrylate	11.00																
Peroxide (Varox 230 XL)	2.50																
Total	169.00																
<p>said outer layer comprising a polyurethane,</p>	<p>"... an outer layer of soft material such as balata or a blend of balata and other elastomers." (col. 5, ll. 15-17.) Also, see below.</p>																
<p>said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi.</p>	<p>"The relatively soft elastomeric material of the outer layer has a flexural modulus in the range of about 20,000 to 25,000 psi, and in one specific embodiment had a flexural modulus of from 22,165 to 22,379 psi." (Proudfit, col. 6, ll. 28-31.)</p>																

As pointed out in the request on page 66 and 67:

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While Proudfit may not expressly disclose the use of polyurethane as an outer cover material, it would have been obvious given that "[t]he patent literature is replete with proposed cover formulations seeking to improve upon the balata and ionomer covers [including] [p]olyurethane" (See Molitor '751, col. 2, lines 9-12.) Soft polyurethane materials had been known to be a substitute for balata covers for decades prior to the filing of the '130 patent.

For example, Molitor '637 discloses the use of polyurethane material as a soft polymeric material that may be used as an outer cover layer of a golf ball. (See Molitor '637, col. 5, lines 33-41; col. 18, Examples 16 and 17.) One exemplary polyurethane material used by Molitor as an outer cover material includes Estane 58133.

As was readily appreciated by those skilled in the art--including the inventor of the '130 patent--the types of materials used in a golf ball are not as critical to a golf ball's playability as are the mechanical properties of those materials. (See Exhibit G at 334.) The Estane 58133 is a relatively soft material and has a Shore D hardness of 55 and is also a low flexural modulus material having a modulus of about 25,000 psi. (See Exhibit J.) Proudfit's outer cover layer is also relatively soft and has a flexural modulus between 20,000 and 25,000 psi. (Proudfit, col. 6, lines 28-31.) Due to the similarities between these two materials, the ordinarily skilled artisan would have recognized the substitutability of these two materials as well as the benefits of using polyurethane as an outer cover material.

On page 67, the request concludes:

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the balata-based outer cover layer of Proudfit to include the Estane polyurethane outer cover layer material of Molitor '637 because such was a well known substitute to balata and gives a number of advantages over balata as would have been readily appreciated by those skilled in the art. These advantages include: (1) improved processability; (2) improved durability when compared to balata; (3) cost-effectiveness when compared to balata; and (4) having a good "click" and "feel." (See *supra* [regarding the what "click" and "feel" mean to a golfer]) All of this would have led one of ordinary skill in the art to replace the soft balata outer cover layer of Proudfit with the soft polyurethane outer cover layer of Molitor '637 at the time of the alleged invention.

This rejection of claim 7 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 47: Patent Owner's Argument

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Patent Owner does not specifically argue this rejection.

Ground 47: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 47: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #48.

The requester submits on pages 68-69 that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

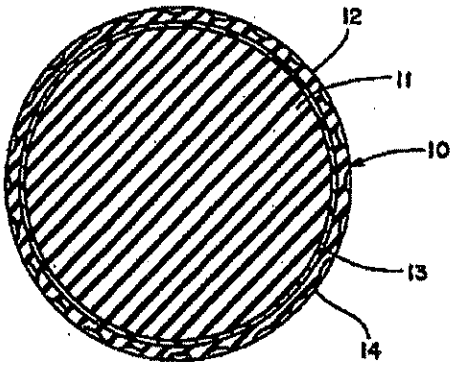
Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 7	Proudfit
A multi-layer golf ball comprising:	"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)

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<p>a spherical core;</p>	 <p>“FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 [in the shape of a sphere] and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.” (Proudfit, col. 7, ll. 21-24)</p> <p>“Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball.” (Proudfit, col. 7, ll. 51-55)</p>
<p>an inner cover layer molded over said spherical core to form a spherical intermediate ball,</p>	<p>“FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.” (Proudfit, col. 7, ll. 21-24)</p> <p>“The inner layer can be molded in one of two methods: 1. Injection molded over the core in a manner which is conventionally used to injection mold ionomers over a solid core. 2. Injection mold halfshells, place halfshells over the core, compression mold the inner cover over the core.” (Proudfit, col. 8, lines 32-38.)</p>
<p>said inner cover layer having a Shore D hardness of at least 60,</p>	<p>“The composition of the inner cover layer is described in Table 6.”</p>

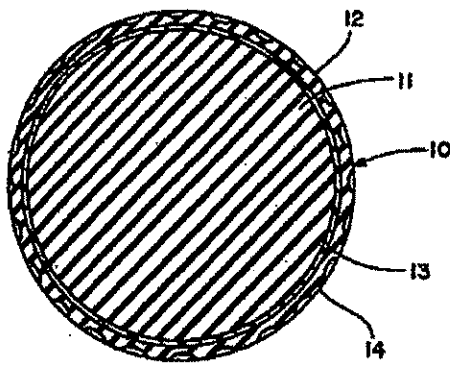
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	<p style="text-align: center;">TABLE 6</p> <table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">Composition of Inner Layer of Cover (Parts by Weight)</th></tr> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p><u>Exhibit I:</u> Surlyn® 8940 has a Shore D hardness of 65; Surlyn® 9910 has a Shore D hardness of 64.</p> <p>Therefore, this cover blend has a hardness of 60 or more. (See Decl. of Edmund A. Hebert at ¶¶ 8-9.)</p>	Composition of Inner Layer of Cover (Parts by Weight)		Ionomer Type	Blend Ratio	Sodium-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
Composition of Inner Layer of Cover (Parts by Weight)									
Ionomer Type	Blend Ratio								
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Zinc-Surlyn 9910	25%								
<p>said inner cover layer comprising an ionomeric resin having no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and</p>	<p>"The composition of the inner cover layer is described in Table 6."</p> <p style="text-align: center;">TABLE 6</p> <table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">Composition of Inner Layer of Cover (Parts by Weight)</th></tr> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>	Composition of Inner Layer of Cover (Parts by Weight)		Ionomer Type	Blend Ratio	Sodium-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
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Ionomer Type	Blend Ratio								
Sodium-Surlyn 8940	75%								
Zinc-Surlyn 9910	25%								

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<p>having a modulus of from about 15,000 to about 70,000 psi; and</p>	<p>"The standard resins have a flexural modulus in the range of about 30,000 to about 55,000 psi as measured by ATM Method D-790. (Standard resins are referred to as "hard Surlins" in U.S. Patent No. 4,884,814.)" (Proudfit, col. 5, line 66-col. 6, line 1.)</p> <p>"Specific standard Surlin resins which can be used in the inner layer include 8940 (sodium), 9910 (zinc)" (Proudfit, col. 6, ll. 6-7.)</p> <p>The composition of the inner cover layer is described in Table 6.</p> <table border="1"> <caption>TABLE 6</caption> <thead> <tr> <th colspan="2">Composition of Inner Layer of Cover (Parts by Weight)</th></tr> <tr> <th>Resin Type</th><th>Elast Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium- Surlin 8940</td><td>75%</td></tr> <tr> <td>Zinc- Surlin 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30.)</p>	Composition of Inner Layer of Cover (Parts by Weight)		Resin Type	Elast Ratio	Sodium- Surlin 8940	75%	Zinc- Surlin 9910	25%
Composition of Inner Layer of Cover (Parts by Weight)									
Resin Type	Elast Ratio								
Sodium- Surlin 8940	75%								
Zinc- Surlin 9910	25%								
<p>a dimpled outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball,</p>	<p>Figure 1 of Proudfit shows dimples formed on the outer surface</p> 								
<p>said outer cover having a Shore D hardness of 64 or less,</p>	<p>"FIG 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24.)</p> <p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5,</p>								

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	<p>ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.</p> <p>An example of this blend is disclose in Table 7 reproduced below.</p> <p style="text-align: center;">TABLE 7</p> <table> <tr> <th colspan="2">Composition of Outer Layer (Parts by Weight)</th></tr> <tr> <td>Trans Polyisoprene (TP-301)</td><td>60.00</td></tr> <tr> <td>Polybutadiene</td><td>40.00</td></tr> <tr> <td>Zinc Oxide</td><td>1.00</td></tr> <tr> <td>Titanium Dioxide</td><td>17.00</td></tr> <tr> <td>Ultramarine Blue color</td><td>.50</td></tr> <tr> <td>Zinc DiAcrylate</td><td>32.00</td></tr> <tr> <td>Peroxide (Varon 230 XL)</td><td>2.50</td></tr> <tr> <td>Total</td><td>162.00</td></tr> </table> <p>Note that Trans Polyisoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert in paragraph 7, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A to the Rule 132 Declaration and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore D hardness of less than 64.</p>	Composition of Outer Layer (Parts by Weight)		Trans Polyisoprene (TP-301)	60.00	Polybutadiene	40.00	Zinc Oxide	1.00	Titanium Dioxide	17.00	Ultramarine Blue color	.50	Zinc DiAcrylate	32.00	Peroxide (Varon 230 XL)	2.50	Total	162.00
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Total	162.00																		
said outer layer comprising a polyurethane,	"... an outer layer of soft material such as balata or a blend of balata and other elastomers." (col. 5, ll. 15-17.) Also, see below.																		
said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi.	"The relatively soft elastomeric material of the outer layer has a flexural modulus in the range of about 20,000 to 25,000 psi, and in one specific embodiment had a flexural modulus of from 22,165 to 22,379 psi." (Proudfit, col. 6, ll. 28-31.)																		

As pointed out in the request on pages 68 and 69:

... Proudfit teaches a golf ball having a two-piece cover including a hard, ionomeric inner cover layer and a soft balata outer cover layer. While Proudfit may not disclose the use of a polyurethane material as the outer cover layer of a golf ball, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the soft balata outer cover layer of Proudfit to include the soft polyurethane material taught by Wu. Wu teaches that: "The problem with SURLYN®-covered golf balls, however, is that they lack the "click" and "feel" which golfers had become accustomed to with balata. "Click" is the sound when the ball is hit by a golf club and "feel" is the overall sensation imparted to the golfer when the ball is hit. It has been proposed to employ polyurethane as a cover

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stock for golf balls because, like SURLYN®, it has a relatively low price compared to balata and provides superior cut resistance over balata. However, unlike SURLYN®-covered golf balls, polyurethane-covered golf balls can be made to have the "click" and "feel" of balata. (Wu at col. 1, lines 36-46.) As the inventor of the '130 patent had indicated in a 1994 publication, golf ball designers understood that the mechanical properties of the layers impacted the performance of the golf ball more than the materials themselves. (Exhibit G at 334.) Additionally, Wu's polyurethane material inherently has a flexural modulus of about 23,000 psi as measured in accordance with ASTM standards. (Decl. of Jeff Dalton at ¶ 7.) Proudfit's outer cover layer material has a flexural modulus of between about 20,000 and 25,000 psi. (Proudfit, col. 6, lines 28-31.) Thus, one of ordinary skill in the art would have appreciated that using Wu's polyurethane as Proudfit's outer cover layer would have provided similar playability characteristics as well as numerous advantages including, for example, durability.

Based on Wu's teachings, one of ordinary skill in the art would have recognized the substitutability of soft polyurethane for soft balata-based materials and the advantages of making such a substitution. These advantages include (1) low price compared to balata; (2) better cut resistance when compared to balata; and (3) a "click" and "feel" that is similar to balata. Moreover, the replacing the balata-material taught by Proudfit would have been obvious to those skilled in the art prior to November 9, 1995 because before that time, the Titleist Professional™ golf ball, which had used Wu's polyurethane material, had replaced balata-covered balls as the market leader. (See Exhibit C; see also Decl. of Jeffery L. Dalton at ¶¶ 3-4.)

On page 69 the request concludes with:

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the alleged invention to modify Proudfit's golf ball by replacing the soft balata outer cover layer with an outer cover layer made of soft polyurethane material because polyurethane provides numerous advantages over balata while exhibiting the "click" and "feel" of balata.

This rejection of claim 7 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 48: Patent Owner's Argument

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Patent Owner does not specifically argue this rejection except that the Dalton Declaration is not competent evidence to establish that polyurethane inherently has a flex modulus is from 1,000 to 30,000 psi (Patent Owner's Argument at middle of page 28).

Ground 48: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 48: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*. Additionally, the Examiner accepts the Dalton Declaration as competent evidence because it is a sworn declaration. As such, the Examiner will not probe the Declarant's veracity. Hence, the flex modulus of polyurethane is considered to about 23,000 psi.

Proposed Third Party Requester Rejection: Ground #49.

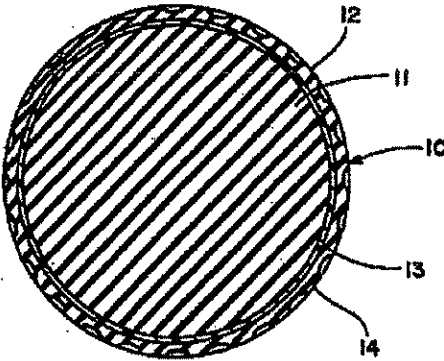
The requester submits on pages 69-71 that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

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Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 7	Proudfit
A multi-layer golf ball comprising:	<p>"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)</p>
a spherical core;	 <p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 [in the shape of a sphere] and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>
an inner cover layer molded over said spherical core to form a spherical intermediate ball,	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11' and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"The inner layer can be molded in one of two methods:</p>

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	<p>1. Injection molded over the core in a manner which is conventionally used to injection mold ionomers over a solid core.</p> <p>2. Injection mold halfshells, place halfshells over the core, compression mold the inner cover over the core.” (Proudfit, col. 8, lines 32-38.)</p>								
said inner cover layer having a Shore D hardness of at least 60,	<p>“The composition of the inner cover layer is described in Table 6.”</p> <table border="1"> <caption>TABLE 6</caption> <thead> <tr> <th colspan="2">Composition of Inner Layer of Cover (Parts by Weight)</th> </tr> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p><u>Exhibit I:</u> Surlyn® 8940 has a Shore D hardness of 65; Surlyn® 9910 has a Shore D hardness of 64.</p> <p>Therefore, this cover blend has a hardness of 60 or more. (See Decl. of Edmund A. Hebert at ¶¶ 8-9.)</p>	Composition of Inner Layer of Cover (Parts by Weight)		Ionomer Type	Blend Ratio	Sodium-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
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	<p>"from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>						
<p>having a modulus of from about 15,000 to about 70,000 psi; and</p>	<p>"The standard resins have a flexural modulus in the range of about 30,000 to about 55,000 psi as measured by ATM Method D-790. (Standard resins are referred to as "hard Surlyns" in U.S. Patent No. 4,884,814.)" (Proudfit, col. 5, line 66-col. 6, line 1.)</p> <p>"Specific standard Surlyn resins which can be used in the inner layer include 8940 (sodium), 9910 (zinc)" (Proudfit, col. 6, ll. 6-7.)</p> <p>The composition of the inner cover layer is described in Table 6.</p> <table border="1"> <caption>TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</caption> <thead> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium- Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc- Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30.)</p>	Ionomer Type	Blend Ratio	Sodium- Surlyn 8940	75%	Zinc- Surlyn 9910	25%
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<p>a dimpled outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball,</p>	<p>Figure 1 of Proudfit shows dimples formed on the outer surface</p>						

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<p>said outer cover having a Shore D hardness of 64 or less,</p>	<p>"FIG 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24.)</p> <p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.</p> <p>An example of this blend is disclose in Table 7 reproduced below.</p> <div style="text-align: center;"> <p>TABLE 7</p> <p>Composition of Outer Layer (Parts by Weight)</p> <table border="1"> <tbody> <tr> <td>Trans Polyisoprene (TP-301)</td><td>60.00</td></tr> <tr> <td>Polybutadiene</td><td>40.00</td></tr> <tr> <td>Zinc Oxide</td><td>5.00</td></tr> <tr> <td>Titanium Dioxide</td><td>17.00</td></tr> <tr> <td>Ultramarine Blue color</td><td>.50</td></tr> <tr> <td>Zinc DiAcrylate</td><td>33.00</td></tr> <tr> <td>Peroxide (Varox 230 XL)</td><td>2.50</td></tr> <tr> <td>Total</td><td>160.00</td></tr> </tbody> </table> </div> <p>Note that Trans PolyIsoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert in paragraph 7, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A to the Rule 132 Declaration and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore D hardness of less than 64.</p>	Trans Polyisoprene (TP-301)	60.00	Polybutadiene	40.00	Zinc Oxide	5.00	Titanium Dioxide	17.00	Ultramarine Blue color	.50	Zinc DiAcrylate	33.00	Peroxide (Varox 230 XL)	2.50	Total	160.00
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<p>said outer layer comprising a polyurethane,</p>	<p>"... an outer layer of soft material such as balata or a blend of balata and other elastomers." (col. 5, ll. 15-17.) Also, see below.</p>																
<p>said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi.</p>	<p>"The relatively soft elastomeric material of the outer layer has a flexural modulus in the range of about 20,000 to 25,000 psi, and in one specific embodiment had a flexural modulus of from 22,165 to 22,379 psi." (Proudfit, col. 6, ll. 28-31.)</p>																

As pointed out in the request on pages 69 and 70:

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...Proudfit teaches a golf ball having a two-piece cover including a hard, ionomeric inner cover layer and a soft balata outer cover layer. While Proudfit may not disclose the use of a polyurethane material as the outer cover layer for a golf ball, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Proudfit's golf ball by replacing the soft balata outer cover layer with the soft polyurethane outer cover layer taught by Molitor '751.

Molitor '751 teaches that: It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76. The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a thermoplastic urethane having a shore A hardness less than 95 and (2) an ionomer having a shore D hardness greater than 55. (Molitor '751, col. 2, lines 33-49.) In explaining what a "two-piece" golf ball is, the Molitor '751 patent explains that: The phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and Other balls having non-wound cores. (Molitor '751, col. 2, lines 7-12.)

Proudfit teaches a "two-piece" golf ball that fits within this definition. Molitor '751 explains that the advantages of using a cover layer including a soft polyurethane material on a two-piece golf ball, such as the golf ball of Proudfit, include "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, lines 61-68.)

Molitor expresses the hardness of the cover material as a Shore C hardness of less than 85, preferably 70 to 85 and most preferably 72 to 76. (Molitor '751, col. 4, lines 21-25.) Based on Callaway's own measurements, a Shore C hardness of 73 is equal to a Shore D hardness of 47. (See U.S. Patent No. 6,905,648, Table 19 (Exhibit L.) A cover material having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

On page 70 the request concludes:

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to replace the soft balata outer cover layer of Proudfit with the soft outer cover layer including a soft polyurethane material as taught by Molitor '751 to provide golf balls that have "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, lines 61-68.)

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This rejection of claim 7 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 49: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 49: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 49: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

Re. Claim 8

Proposed Third Party Requester Rejection: Ground #50.

The requester submits on pages 71 that claim 8 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

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Page 182

This rejection of claim 7 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 49: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 49: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 49: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

Re. Claim 8

Proposed Third Party Requester Rejection: Ground #50.

The requester submits on pages 71 that claim 8 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

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Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #51.

In the alternative, the requester submits on pages 71-72 that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Proposed Third Party Requester Rejection: Grounds #52.

The requester submits on pages 72 of the request that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Proposed Third Party Requester Rejection: Ground #53.

The requester submits on pages 61-63 of the request that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '751.

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Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 8	Nesbitt
The multi-layer golf ball of claim 7	See above.
wherein the Shore D hardness of said outer cover layer is less than the Shore D hardness of said inner cover layer.	"The disclosure embraces a golf ball and method of making same wherein the golf ball has a solid ... resilient center or core, and a multilayer cover construction, which involves a first layer or ply of molded hard, high flexural modulus resinous material on the core, and a second or cover layer of soft, low flexural modulus resinous material molded over the first layer to form a finished golf ball." (Nesbitt, Abstract.)

These rejections of claim 8 based on Nesbitt in view of Molitor '637; Wu; or Molitor '751 were proposed by the third party requester in the request for reexamination and are being adopted essentially as proposed in the request.

Grounds 51, 52, and 53: Patent Owner's Argument

Patent Owner does not specifically argue these rejections.

Grounds 51, 52, and 53: Third Party Requester's Comments

Third Party Requester does not specifically counter argue these rejections.

Grounds 51, 52, and 53: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 8 under 35 USC 103(a) as being obvious by Nesbitt in view Molitor '637; Wu;

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or Molitor '751 are maintained. See "Ground 2(or 3)(or 4): Examiner's Response to the Argument," *supra*.

Proposed Third Party Requester Rejection: Grounds #54-56.

The requester submits on page 72 that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

The requester submits on page 72 that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

The requester submits on page 72 that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

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Claim 8	Proudfit
The multi-layer golf ball of claim 7	See above.
wherein the Shore D hardness of said outer cover layer is less than the Shore D hardness of said inner cover layer.	"This invention relates to golf balls, and, more particularly, to a golf ball having a two-layer cover. The inner layer is formed from hard resin material such as ionomer resin, and the outer layer is formed from soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 1, ll. 11-16.)

These rejections of claim 8 based on Proudfit in view of Molitor '637; Wu; or Molitor '751 were proposed by the third party requester in the request for reexamination and are being adopted essentially as proposed in the request.

Grounds 54, 55, and 56: Patent Owner's Argument

Patent Owner does not specifically argue these rejections.

Grounds 54, 55, and 56: Third Party Requester's Comments

Third Party Requester does not specifically counter argue these rejections.

Grounds 54, 55, and 56: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 8 under 35 USC 103(a) as being obvious by Nesbitt in view Molitor '637; Wu; or Molitor '751 are maintained. See "Ground 2(or 3)(or 4): Examiner's Response to the Argument," *supra*.

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Unexpected Results and Commercial Success

Patent Owner's Argument

Besides arguing the outstanding rejections of individual claims as explained *supra*, the Patent Owner argues generally for non-obviousness of the invention based on unexpected results and commercial success (*see* Patent Owner's Response at pages 6-9). The crux of the argument is that, although the instant invention is made of individual elements known in the art, the unique combination of elements of the claimed invention results in a golf ball with excellent ""distance"" and ""feel"" (Patent Owner's Response at page 7). Consequently, golf balls within the ambit of the claimed invention (*i.e.*, the Rule 35 ball of the Patent Owner and the Pro V1 of the Third Party Requester) have great commercial success. Hence, the "[u]nexpected and overwhelming success of Mr. Sullivan's golf ball technology thus demonstrates that his invention was not simply the predictable result of combining known materials, but in fact represented the best solution even conceived for the distance-versus-control problem" (Patent Owner's Response at page 9).

Third Party Requester's Comments

The Third Party Requester comments that: (1) the Sullivan '103 patent does not disclose or suggest the Pro V1 because the Pro V1 has a construction different in several aspects (*e.g.*, core size) from the ball disclosed in the Sullivan '130 patent (Third Party Requester's Comments at page 35 to middle of page 37); (2) there is no nexus between the commercial success of the Third Party Requester's Pro V1 and the Sullivan '130 patent because the Pro V1's success rests upon specific types of advertising (Third Party Requester's Comments at middle of page 37 to

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middle of page 40) along with different technology (Third Party Requester's Comments at middle of page 40 to page 43); (3) many golf balls purport to have solved the distance and "feel" problem (Third Party Requester's Comments at bottom of page 43 top of page 45); and, (4) even though there were other three-piece, polyurethane balls available, there was little demand for the ball on the PGA tour until shortly before the introduction of the Pro V1 (Third Party Requester's Comments at page 45 to page 46).

Examiner's Response to the Argument and Comments

Examiner generally agrees with the comments of the Third Party Requester and finds the arguments of the Patent Owner of unexpected results and commercial success to be unpersuasive.

As a preliminary matter, the argument(s) presented for secondary considerations presented by the Patent Owner are not relevant to the rejections made under 35 USC 102 (*see* MPEP 2131.04). Thus only the rejections under 35 USC 103 are considered.

To show unexpected results (*i.e.*, unique and excellent combination of distance and "feel") the Patent Owner uses testimonial-type evidence of statements, or endorsements, by well known golfers such as Arnold Palmer (Patent Owner's Response at bottom on page 8).

Examiner considers this to be opinion evidence because the statements are not accompanied by objective data. Due to this lack of objective data, the probative value of the presented opinion evidence is not sufficient to overcome the *prima facie* rejections, *supra*, maintained in this office action.

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The evidence of commercial success proffered by the Patent Owner is similarly testimonial in nature (*e.g.*, "Pro V1 is the "most successful golf ball in the history of the golf industry . . ." citing an article in the Golf Gazette). Again no objective data is presented as support. With no objective data, the probative value of the presented evidence is again not sufficient to overcome the *prima facie* rejections, *supra*, maintained in this office action.

As to the comments of the Third Party Requester concerning, *inter alia*, the scope of the claims of the Sullivan '130 patent and its nexus with the Pro V1, the Examiner did not evaluate these comments since the secondary considerations presented by the Patent Owner were not found sufficient for the reasons given immediately above.

Shore D hardness value measured on the ball

Patent Owner's Argument

Besides arguing the outstanding rejections of individual claims as explained *supra* and commercial success *id.*, the Patent Owner argues that the claims in the instant patent require the Shore D hardness value's of the cover layers to be measured "on the ball" (Patent Owner's Response at pages 10-12). Since the two base references (Nesbitt and Proudfit) do not disclose measuring hardness "on the ball" for their covers, the outstanding rejections are flawed (Patent Owner's Response at pages 12-13).

Third Party Requester's Comments

The Third Party Requester comments that: (1) in a reexamination claims are given their broadest reasonable interpretation consistent with the specification, and, here, "on the ball" is too

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narrow a construction (Third Party Requester's Comments at page 7); (2) the specification of the instant patent clearly states at col. 16, lines 15-16, that "Shore hardness was measured in accordance with ASTM test 2240" which calls for "off the ball" testing (Third Party Requester's Comments at page 8); (3) the Patent Owner knew how to claim "on the ball" because in a sister patent the language of "as measured on the curved surface thereof" is explicitly used (Third Party Requester's Comments at bottom of page 9 to middle of page 10); and, (4) even if measured "on the ball" the prior art is still good because measuring Shore D hardness "on the ball" does not affect the disclosed values enough to make the instant patent's claims patentable over the prior art (Third Party Requester's Comments at bottom of page 10 to page 12).

Examiner's Response to the Argument and Comments

Examiner generally agrees with the comments of the Third Party Requester and finds the arguments of the Patent Owner concerning measuring of hardness "on the ball" in the claim language to be unpersuasive.

The rule is that "[d]uring reexamination claims are given the broadest reasonable interpretation consistent with the specification" (MPEP 2658(I) and 2258(I)(G)). Here, the claims are silent as to whether the Shore D hardness value is measured "on the ball" or not. In the specification, hardness measurements are disclosed at col. 7, lines 20-22, and col. 14, lines 49-50, and are to be conducted "in accordance with ASTM method D-2240." ASTM D-2240's method of testing uses a specimen of material, and are not measured "on the ball" (Exhibit C). However, in the examples section of the specification there is language that appears to support an interpretation of hardness values measured "on the ball." An example of the language is

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"properties of the finished balls are set forth below" at col. 22, lines 65-68. Also, hardness values in the tables for layered golf balls are not consistent with the hardness values of the constituent resins that make up that layer (for example, Patent Owner's discussion of Iotek 959 and Iotek 960 starting at the bottom of page 10 of the Response).

The specification, then, appears ambiguous as to interpret the claim language. However, the Federal Circuit has held that "a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment (MPEP 2111.01(II) citing *Superguide Corp. v. DirecTV Enterprises, Inc.*). Further, the Fed. Cir. has stated that "[t]he problem is to interpret claims 'in view of the specification' without unnecessarily importing limitations from the specification into the claim" (MPEP 2111.01(II) citing *E-Pass Techs., Inc. v. 3Com Corp.*).

Since there is ambiguity in the specification as to how hardness values are measured and mindful of not reading limitations into the claim language, the Examiner considers the broadest reasonable interpretation of this claim language to not require the hardness values to be measured "on the ball."

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Correspondence

All correspondence relating to this *inter partes* reexamination proceeding should be directed as follows:

By U.S. Postal Service Mail to:

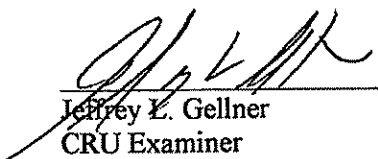
Mail Stop *Inter Partes* Reexam
ATTN: Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By hand to: Customer Service Window
ATTN: Central Reexamination Unit
Randolph Building
401 Dulany St.
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Signed:



Jeffrey L. Gellner
CRU Examiner
GAU 3993

conferees:



EXHIBIT 17

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

CONTROL NO.	FILING DATE	PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
95/000,121	01/17/06	6,503,156	

DOROTHY P WHELAN
FISH & RICHARDSON P.C.
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER

GELLNER, J.

ART UNIT

PAPER

3993

DATE MAILED:

01/30/08

**INTER PARTES REEXAMINATION
COMMUNICATION**

BELOW/ATTACHED YOU WILL FIND A COMMUNICATION FROM THE UNITED STATES PATENT AND TRADEMARK OFFICE OFFICIAL(S) IN CHARGE OF THE PRESENT REEXAMINATION PROCEEDING.

All correspondence relating to this *inter partes* reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

ALAN M. GRIMALDI
HOWREY LLP
1299 PENNSYLVANIA AVENUE, NW
WASHINGTON, DC 20004

**Transmittal of Communication to Third Party Requester
Inter Partes Reexamination**

REEXAMINATION CONTROL NUMBER 95/000,121.

PATENT NUMBER 6,503,156.

TECHNOLOGY CENTER 3999.

ART UNIT 3993.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above-identified reexamination proceeding. 37 CFR 1.903.

Prior to the filing of a Notice of Appeal, each time the patent owner responds to this communication, the third party requester of the *inter partes* reexamination may once file written comments within a period of 30 days from the date of service of the patent owner's response. This 30-day time period is statutory (35 U.S.C. 314(b)(2)), and, as such, it cannot be extended. See also 37 CFR 1.947.

If an *ex parte* reexamination has been merged with the *inter partes* reexamination, no responsive submission by any *ex parte* third party requester is permitted.

All correspondence relating to this *inter partes* reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

OFFICE ACTION IN INTER PARTES REEXAMINATION	Control No.	Patent Under Reexamination	
	95/000,121	6503156	
	Examiner	Art Unit	
	Jeffrey L. Gellner	3993	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

Responsive to the communication(s) filed by:
 Patent Owner on 30 April 2007
 Third Party(ies) on 29 May 2007

RESPONSE TIMES ARE SET TO EXPIRE AS FOLLOWS:

For Patent Owner's Response:
2 MONTH(S) from the mailing date of this action. 37 CFR 1.945. EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.956.

For Third Party Requester's Comments on the Patent Owner Response:
 30 DAYS from the date of service of any patent owner's response. 37 CFR 1.947. NO EXTENSIONS OF TIME ARE PERMITTED. 35 U.S.C. 314(b)(2).

All correspondence relating to this inter partes reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Office action.

This action is not an Action Closing Prosecution under 37 CFR 1.949, nor is it a Right of Appeal Notice under 37 CFR 1.953.

PART I. THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892
 2. ☒ Information Disclosure Citation, PTO/SB/08
 3. ☐ _____

PART II. SUMMARY OF ACTION:

1a. ☒ Claims 1-11 are subject to reexamination.
 1b. ☐ Claims _____ are not subject to reexamination.
 2. ☐ Claims _____ have been canceled.
 3. ☐ Claims _____ are confirmed. [Unamended patent claims]
 4. ☐ Claims _____ are patentable. [Amended or new claims]
 5. ☒ Claims 1-11 are rejected.
 6. ☐ Claims _____ are objected to.
 7. ☐ The drawings filed on _____ ☐ are acceptable ☐ are not acceptable.
 8. ☐ The drawing correction request filed on _____ is: ☐ approved. ☐ disapproved.
 9. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119 (a)-(d). The certified copy has:
☐ been received. ☐ not been received. ☐ been filed in Application/Control No 95000121.
 10. ☐ Other _____

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DETAILED ACTION

This 2nd Action Non-Final is in response to the Patent Owner's response received 30 April 2007 and the Third Party Requester's response received 29 May 2007. The action is non-final and not an action closing prosecution because, upon review of the arguments presented by the Third Party Requester, Examiner has newly adopted in this office action Grounds 1, 8, 15, 22, 29, 36, 43, 50, 57, 64, and 71 of rejection.

IDS

The IDS received 5 Nov. 2007 is acknowledged. A signed 1449 accompanies this office action. The marked through entry, or document, could not be found by the Examiner in the image file wrapper (IFW). Patent Owner should review the IFW to ensure that all entries are properly presented.

Reexamination Procedures

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be an Action Closing Prosecution (ACP), will be governed by 37 CFR 1.116(b) and (d), which will be strictly enforced.

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Statutory Basis for Grounds of Rejections - 35 USC § 102 and 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Third Party Requester's Grounds of Rejections

Re. Claim 1

Ground #1. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

Ground #2. In the alternative to Ground #1, the requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637, (Molitor '637).

Ground #3. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673, (Wu).

Ground #4. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751, (Molitor '751).

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Ground #5. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #6. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #7. The requester submits that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 2

Ground #8. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193.

Ground #9. In the alternative to Ground #8, the requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #10. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #11. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Ground #12. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #13. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

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Ground #14. The requester submits that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 3

Ground #15. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193.

Ground #16. In the alternative to Ground #15, the requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #17. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #18. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Ground #19. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #20. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #21. The requester submits that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 4

Ground #22. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193.

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Ground #23. In the alternative to Ground #22, the requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #24. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #25. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Ground #26. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #27. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #28. The requester submits that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 5

Ground #29. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193.

Ground #30. In the alternative to Ground #29, the requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #31. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673.

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Ground #32. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Ground #33. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #34. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #35. The requester submits that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 6

Ground #36. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193.

Ground #37. In the alternative to Ground #36, the requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #38. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #39. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Ground #40. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,274,637.

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Ground #41. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #42. The requester submits that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 7

Ground #43. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

Ground #44. In the alternative to Ground #43, the requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637, (Molitor '637).

Ground #45. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673, (Wu).

Ground #46. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751, (Molitor '751).

Ground #47. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #48. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #49. The requester submits that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

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Re. Claim 8

Ground #50. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

Ground #51. In the alternative to Ground #50, the requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637, (Molitor '637).

Ground #52. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673, (Wu).

Ground #53. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751, (Molitor '751).

Ground #54. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #55. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #56. The requester submits that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 9

Ground #57. The requester submits that claim 9 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

Ground #58. In the alternative to Ground #57, the requester submits that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637, (Molitor '637).

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Ground #59. The requester submits that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673, (Wu).

Ground #60. The requester submits that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751, (Molitor '751).

Ground #61. The requester submits that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #62. The requester submits that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #63. The requester submits that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 10

Ground #64. The requester submits that claim 10 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

Ground #65. In the alternative to Ground #63, the requester submits that claim 10 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637, (Molitor '637).

Ground #66. The requester submits that claim 10 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673, (Wu).

Ground #67. The requester submits that claim 10 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751, (Molitor '751).

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Ground #68. The requester submits that claim 10 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #69. The requester submits that claim 10 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

Ground #70. The requester submits that claim 10 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Re. Claim 11

Ground #71. The requester submits that claim 11 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

Ground #72. In the alternative to Ground #57, the requester submits that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,274,637, (Molitor '637).

Ground #73. The requester submits that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Wu, U.S. Pat. No. 5,334,673, (Wu).

Ground #74. The requester submits that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193, in view of Molitor et al., U.S. Pat. No. 4,674,751, (Molitor '751).

Ground #75. The requester submits that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,274,637.

Ground #76. The requester submits that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Wu, U.S. Pat. No. 5,334,673.

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Ground #77. The requester submits that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187, in view of Molitor et al., U.S. Pat. No. 4,674,751.

Summary of Grounds Adopted vel non

In sum, Proposed Grounds 1-11, 15-39, 43-67 and 72-77 are **Adopted** by the Examiner.

In sum, Proposed Grounds 12-14, 40-42, and 68-71 are **Not Adopted** by the Examiner.

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Summary of the Grounds of Rejections

Claims 1-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Pat. No. 4,274,637 (Molitor '637).

Claims 1-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) mentioning Molitor et al., U.S. Pat. No. 4,274,637 (Molitor '637) in view of Wu, U.S. Pat. No. 5,334,673, (Wu) as evidenced by Exhibit C.

Claims 1-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) mentioning Molitor et al., U.S. Pat. No. 4,274,637 (Molitor '637) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claims 1, 3-5, 7-9 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,274,637 (Molitor '637).

Claims 1, 3-5, 7-9 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

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Claims 1, 3-5, 7-9 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

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Proposed Third Party Requester's Rejections

Issue of Inherency

Multiple proposed rejections that the third party requester submits are based on the inherent properties of the materials. In order to prove the inherent properties of these materials the requester has provided "product data sheets" for the following materials: SURLYN (Exhibit I) and ESTANE (Exhibit J). These "product data sheets" have publication dates later than the critical date of the claimed inventions. Also, the third party requester has provided other Exhibits to prove or evidence inherency, e.g. Exhibit C (description of a golf product performance characteristics); Exhibits G and L (patent owners admissions)

MPEP § 2124 lists exceptions to the rule that the publication date must precede the critical data of the claimed invention: "...facts [that] include the characteristics and properties of a material... ". The Shore D hardness and flexural modulus are characteristics and properties of a material. Thus, it is appropriate to use these "product data sheets" to show such a universal fact as the inherent properties of a known material. Moreover, see also MPEP § 2112.01: "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977)." And, "Products of identical chemical composition can not have mutually exclusive properties." "A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)."

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Re. Claim 1

Proposed Third Party Requester Rejection: Ground #1.

The requester submits on pages 14-18 that claim 1 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

In the request on pages 14 through 18 the third party requester proposes that claim 1 be rejected based upon Nesbitt alone with the incorporation by reference of Molitor '637. The third party requester points out that Molitor '637 is incorporated by reference into Nesbitt because Nesbitt refers to Molitor '637. (See Nesbitt col. 3, ll. 54-60).

This rejection is adopted in this office action.

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt (incorporating by reference Molitor '637).

Below is a claim chart identifying the claim limitations and which reference Nesbitt (incorporating by reference Molitor '637) discloses the claim limitations.

Claim 1	Nesbitt (primary) with Molitor '637 (incorporated by reference)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed on said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).

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<p>said inner cover layer having a Shore D hardness of at least 60,</p>	<p><u>Nesbitt</u>: "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p><u>Per the '156 Patent</u>: "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 46-48.)</p> <p><u>Exhibit I</u>: DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.</p>
<p>said inner cover layer comprising a blend of two or more low acid ionomer resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and</p>	<p>"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
<p>an outer cover layer disposed on said inner cover layer,</p>	<p>"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)</p>
<p>said outer cover layer having a Shore D hardness of about 64 or less,</p>	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See below for Shore D hardness of 64 or less limitation explanation.</p>
<p>a thickness of from about 0.01 to about 0.07 inches, and</p>	<p>"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably</p>

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	of a thickness in a range of 0.020 inches and 0.070 inches.” (Nesbitt, col. 3, lines 19-23.)
comprising a polyurethane material.	<p><u>Nesbitt</u>: “Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention.” (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor ‘637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

As mentioned above, Nesbitt incorporating by reference Molitor ‘637 describe a number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor ‘637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the ‘981 Patent has “from about 5[%] to about 15% by weight of unsaturated carboxylic acid.” ‘981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been “redesignated” as SURLYN 8940 and SURLYN 1557 has been “redesignated” as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan ‘873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt’s first (inner) layer and is a sodium ion based low acid “(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi.” See ‘873 Patent, col. 2, ll. 43-50. Moreover, as shown in the “Properties Grid for Selected Industrial Grades of SURLYN” SURLYN 9650’s ordinate compared to the other grades of SURLYN is

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toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Also, as mentioned above, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64. Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

Also, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU

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Product Data Sheet". A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64. Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Moreover, Molitor '637 teaches a list of materials that may adapted for use in the invention:

Homopolymeric and copolymeric substances, such as (1) vinyl resins formed by the polymerization of vinyl chloride or by the copolymerization of vinyl chloride with unsaturated polymerizable compounds, e.g., vinyl esters; (2) polyolefins such as polyethylene, polypropylene, polybutylene, transpolyisoprene, and the like, including copolymers of polyolefins; (3) polyurethanes such as are prepared from polyols and organic polyisocyanates; (4) polyamides such as polyhexamethylene; (5) polystyrene, high impact polystyrene, styrene acrylonitrile copolymer and ABS, which is acrylonitrile, butadiene styrene copolymer; (6) acrylic resins as exemplified by the copolymers of methylmethacrylate, acrylonitrile, and styrene, etc.; (7) thermoplastic rubbers such as the urethanes, copolymers of ethylene and propylene, and transpolyisoprene, block copolymers of styrene and cispolybutadiene, etc.; and (8) polyphenylene oxide resins, or a blend with high impact polystyrene known by the trade name "Noryl."

See Molitor '637, col. 5, ll. 33-50.

As the request recognizes on page 17:

Moreover, as recognized by the inventor himself, the particular materials used in the golf balls were not as important as the mechanical properties of those layers. (See Exhibit G at 334.) Furthermore, the relatively soft polyurethane material taught by Molitor '637 and the relatively soft ionomer inner cover layer taught by Nesbitt have similar mechanical properties including an identical Shore D hardness of 55 and a similar, relatively low flexural modulus of 25,000 and 14,000 psi, respectively. (Compare Exhibit I with Exhibit J.) This would have further suggested to those skilled in the art that the soft polymeric materials taught by Molitor, including, for example, the relatively soft polyurethane material would have been substitutable for the soft ionomer outer cover layer in one example taught by Nesbitt.

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In addition, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334.

This rejection of claim 1 based on Nesbitt incorporating by reference Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 1: Patent Owner's Argument

Patent Owner does not argue this rejection.

Ground 1: Third Party Requester's Comments

Third Party Requester argues that the language of Nesbitt at col. 3, lines 56-61, was a proper incorporation by reference of Molitor '637. In the 1st Office Action the Examiner stated that the language of Nesbitt was not proper incorporation of reference because the perfecting root words of "incorporate" and "reference" were not in the reference statement. Third Party Requester's rebuttal is that the standard used by the Examiner was not the standard for incorporation by reference during prosecution of the Nesbitt patent (Third Party Requester's Comments at pages 2-5). The Third Party Requester bolsters this argument by citing several court decisions (Third Party Requester's Comments at pages 5-6).

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Ground 1: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. The language of incorporation used in Nesbitt is found at col. 3, lines 54-61, and states that "Polymeric materials are preferably such as ionomer resins which are foamable. **Reference is made** to the application Ser. No. 15,658, of Robert P. Molitor issued into U.S. Patent No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for one or both layers" (emphasis added).

The pertinent language of incorporation by reference quoted in *In re Hughes* is found at 550 F.2d 1275 and states that "**Reference is made** to application Ser. No. 131,108 for complete description of methods of preparing aqueous polymeric dispersions applicable in the hereinafter described invention" (emphasis added). This language was held to incorporate '108.

The pertinent language of incorporation by reference quoted in *In re Voss* is found at 557 F.2d 816 and states that "**Reference is made** to United States Patent No. 2,920,971, granted to S.D. Stookey '971, for a general discussion of glass-ceramic materials and their production" (emphasis added). This language was held to incorporate '971.

Since the language in Nesbitt for incorporation by reference is virtually identical to the language used in *In re Hughes* and *In re Voss*, the Examiner concludes that Nesbitt incorporates by reference Molitor '637.

Proposed Third Party Requester Rejection: Ground #2.

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In the alternative, the requester submits on pages 14-18 that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 1	Nesbitt (primary) with Molitor '637 (teaching)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed on said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material..." (Nesbitt, col. 2, ll. 34-37).
said inner cover layer having a Shore D hardness of at least 60,	<u>Nesbitt</u> : "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.) <u>Per the '156 Patent</u> : "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 46-48.) <u>Exhibit I</u> : DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.
said inner cover layer comprising a blend of two or more low acid ionomer resins, each containing no more than	"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of

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16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>this invention.” (Nesbitt, col. 3, ll. 54-60).</p> <p>Molitor ‘637: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor ‘637, col. 14, l. 22 to col. 16, l. 34).</p>
an outer cover layer disposed on said inner cover layer,	<p>“An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ...” (Nesbitt, col. 2, ll. 43-47.)</p>
said outer cover layer having a Shore D hardness of about 64 or less,	<p>Nesbitt: “Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention.” (Nesbitt, col. 3, ll. 54-60.)</p> <p>Molitor ‘637: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See below for Shore D hardness of 64 or less limitation explanation.</p>
a thickness of from about 0.01 to about 0.07 inches, and	<p>“It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches.” (Nesbitt, col. 3, lines 19-23.)</p>
comprising a polyurethane material.	<p>Nesbitt: “Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention.” (Nesbitt, col. 3, ll. 54-60.)</p> <p>Molitor ‘637: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>Exhibit J: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric</p>

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thermoplastic elastomer.

As mentioned above, Nesbitt references Molitor '637 as describing a number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Also, as mentioned above, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64.

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Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

Also, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". **A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64.** Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Moreover, Molitor '637 teaches a list of materials that may adapted for use in the invention:

Homopolymeric and copolymeric substances, such as (1) vinyl resins formed by the polymerization of vinyl chloride or by the copolymerization of vinyl chloride with unsaturated polymerizable

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compounds, e.g., vinyl esters; (2) polyolefins such as polyethylene, polypropylene, polybutylene, transpolyisoprene, and the like, including copolymers of polyolefins; (3) polyurethanes such as are prepared from polyols and organic polyisocyanates; (4) polyamides such as polyhexamethylene; (5) polystyrene, high impact polystyrene, styrene acrylonitrile copolymer and ABS, which is acrylonitrile, butadiene styrene copolymer; (6) acrylic resins as exemplified by the copolymers of methylmethacrylate, acrylonitrile, and styrene, etc.; (7) thermoplastic rubbers such as the urethanes, copolymers of ethylene and propylene, and transpolyisoprene, block copolymers of styrene and cispolybutadiene, etc.; and (8) polyphenylene oxide resins, or a blend with high impact polystyrene known by the trade name "Noryl."

See Molitor '637, col. 5, ll. 33-50.

As the request recognizes on page 17:

Moreover, as recognized by the inventor himself, the particular materials used in the golf balls were not as important as the mechanical properties of those layers. (See Exhibit G at 334.) Furthermore, the relatively soft polyurethane material taught by Molitor '637 and the relatively soft ionomer inner cover layer taught by Nesbitt have similar mechanical properties including an identical Shore D hardness of 55 and a similar, relatively low flexural modulus of 25,000 and 14,000 psi, respectively. (Compare Exhibit I with Exhibit J.) This would have further suggested to those skilled in the art that the soft polymeric materials taught by Molitor, including, for example, the relatively soft polyurethane material would have been substitutable for the soft ionomer outer cover layer in one example taught by Nesbitt.

In addition, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334.

Thus, because it appears that to one of ordinary skill in the art at the time the invention was created that the actual chemical composition of the material is not critical to the practice of

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the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 1 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 2: Patent Owner's Argument

Patent Owner argues that the combination of Nesbitt and Molitor '637 is improper because: (1) Nesbitt's entire focus is on golf balls with all-ionomer resins, preferably foamable, two-layer covers and references Molitor '637 for examples of foamable ionomer resins. Hence, Nesbitt teaches away from the disclosure of Molitor '637's disclosure of non-ionomeric resins, including polyurethane (Patent Owner's Response at page 15 to page 16); (2) in a deposition (Exhibit F) Nesbitt, himself, stated that he did not consider use of polyurethane as an outer cover material (Patent Owner's Response at middle of page 16); (3) Nesbitt combined with Molitor '637 is improper because their individually disclosed thicknesses for the outer layer are divergent (Patent Owner's Response at page 17); (4) neither reference discloses a Shore D hardness of 64 or less for the outer layer measured on the ball with the Examiner relying on commercial literature of ESTANE polyurethane (Exhibit J) for a hardness value. This value is not probative because hardness values of the same material will differ depending upon the total construction of the ball (Patent Owner's Response at bottom of page 18); and, (5) the combination

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impermissibly uses hindsight construction by scouring the prior art to locate individual claim elements (Patent Owner's Response at bottom of page 19).

Ground 2: Third Party Requester's Comments

As to the Patent Owner's first argument, the Third Party Requester states that the plain language of Nesbitt is that the outer or inner cover layers can be of a synthetic polymeric material and that Molitor '637 gives examples of synthetic polymeric materials, including polyurethane (Third Party Requester's Comments at page 19 to top of page 20).

As to the Patent Owner's second argument, the Third Party Requester states that the Fed. Cir. takes a dim view of testimony for a patent's meaning from inventors after the fact citing *Bell & Howell Document Mgmt. Prods. Co. v Altek Sys.* (Third Party Requester's Comments at middle of page 20).

As to the Patent Owner's third argument, the Third Party Requester states that the range of thicknesses in the two patents overlap and disclose in part the same ranges, and, hence a person of ordinary skill would find it obvious to substitute one layer material for another (Third Party Requester's Comments at bottom of page 20 to top of page 21).

As to the Patent Owner's fourth argument, the Third Party Requester states that an expert in the art produced a three-piece ball with the core and inner layer of Nesbitt and the cover of Molitor '637. The ball exhibited Shore hardness values within those of the claimed values (Third Party Requester's Comments at bottom of page 21 to top of page 22).

As to the Patent Owner's fifth argument, the Third Party Requester states that the combination of a ball with the core and inner layer of Nesbitt with an outer polyurethane layer is

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proper in light of the decisions in *Ex parte Sullivan* and *KSR v. Teleflex* (Third Party Requester's Comments at page 14 to page 16). In *Sullivan* a split panel of the BPAI held that "[i]n applying the test for obviousness, we conclude that the teaching of WU clearly would have made it obvious at the time of the invention was made to a person of ordinary skill in the art to have modified Nesbitt's golf ball by using polyurethane as the outer cover material to achieve the expected benefits therefrom taught by Wu (i.e., to have the "click" and "feel" of balata, improved shear resistance and cut resistance; durability; and resiliency)." (Third Party Requester's Comments at middle of page 14). In *KSR* a unanimous Court held that "[c]ommon sense teaches . . . that . . . in many cases, a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." (Third Party Requester's Comments at page 16).

Ground 2: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester and the rejection of claim 1 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. Although Nesbitt's emphasis (in his patent and deposition) may be on all-ionomer resins, it is settled law that a patent teaches all that it discloses, including nonpreferred embodiments (MPEP 2123(I)). Since Nesbitt references the Molitor '637 patent, one of ordinary skill would logically look at its complete disclosure which includes the use of polyurethane as an outer cover. The combination is proper because, in addition to the holdings quoted by the Third Party Requester in their comments, the Supreme Court has held that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a

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person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion of *KSR* at middle of page 17). Here, the problem of producing a golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at bottom of page 4). Polyurethane was a known solution for providing "click" and feel (Wu at col. 1, lines 40-45). The resulting golf ball with a polyurethane outer cover layer had the expected results (*Sullivan* at page 11). Thus, the golf balls of claim 1 are of ordinary skill and common sense.

Proposed Third Party Requester Rejection: Ground #3.

The requester submits on pages 18-20 of the request that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Wu discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 1	Nesbitt mentioning Molitor '637 with Wu (teaching)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the

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	same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed on said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material..." (Nesbitt, col. 2, ll. 34-37).
said inner cover layer having a Shore D hardness of at least 60,	<u>Nesbitt</u> : "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.) <u>Per the '156 Patent</u> : "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 46-48.) <u>Exhibit I</u> : DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.
said inner cover layer comprising a blend of two or more low acid ionomer resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60). <u>Molitor '637</u> : Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).
an outer cover layer disposed on said inner cover layer,	"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)
said outer cover layer having a Shore D hardness of about 64 or less,	<u>Nesbitt</u> : "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)

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	<p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p><u>Wu</u>: "Preferably, a golf ball is made in accordance with the present invention by molding a cover about a core wherein the cover is formed from a polyurethane composition comprising a polyurethane prepolymer and a slow-reacting polyamine curing agent or a difunctional glycol." (Wu, col. 3, ll. 62-66).</p> <p><u>Wu</u>: "With polyurethanes made in accordance with the present invention, the degree of cure which has taken place is dependent upon, inter alia, the time, temperature, type of curative, and amount of catalyst used. It has been found that the degree of cure of the cover composition is directly proportional to the hardness of the composition. A hardness of about 10D to 30D, Shore D hardness for the cover stock at the end of the intermediate curing step (i.e. just prior to the final molding step) has been found to be suitable for the present invention. More preferred is a hardness of about 12D to 20D." (Wu, col. 6, ll. 27-38).</p> <p>See also below for Shore D hardness of 64 or less limitation explanation.</p>
a thickness of from about 0.01 to about 0.07 inches, and	<p>"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)</p>
comprising a polyurethane material.	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p>

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	<p>Exhibit J: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p> <p>Wu: “[t]he present invention is a golf ball product made from a polyurethane prepolymer cured with a slow-reacting curing agent selected from the group of slow-reacting polyamine curing agents or difunctional glycols. The term “golf ball product” as used in the specification and claims means a cover, a core, a center or a one-piece golf ball. The cover of a golf ball made in accordance with the present invention has been found to have good shear resistance, cut resistance, durability and resiliency. Preferably, the polyurethane composition of the present invention is used to make the cover of a golf ball.” (Wu, col. 2, ll. 33-44).</p>
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As mentioned above, Nesbitt mentioning Molitor ‘637 teaches the use of particular polyurethane materials for the use as an outer layer. Wu teaches that polyurethane was being used as the outer layer of golf ball *circa* 1993. Wu further teaches in col. 1:36-46 that SURLYN covered golf balls lack the “click” and “feel” of balata which golfers have become accustomed to such sensations and polyurethane covered golf balls can be made to have a similar “click” and “feel” of balata. Wu also at least teaches that polyurethanes made according to its invention will have Shore D hardness directly proportional to the degree of cure of the cover; and this Shore D hardness ranges from 10 to 30, preferably 12 to 20 on the Shore D scale, see col. 6:26-38. This teaching of Shore D hardness is directed to an intermediate curing step product prior to the final molding process to finish the golf ball. Exhibit C demonstrates the actual finished golf ball product having the cover layer that Wu teaches within its disclosure. Exhibit C teaches that the golf ball taught therein is covered by the following patents: 4,783,078; 4,846,910; 4,858,923; 4,904,320; 4,915,390; 5,007,594; 5,080,367; 5,133,509; **5,334,673**; and D339,074. The ‘673

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Patent teaches the cover sock of the Exhibit C finished golf ball. Exhibit C teaches that the golf ball taught therein has a cover material made from an "elastomer", having a thickness of .050", and 58 Shore D hardness. All three properties are within the range of mechanical properties of the claim invention (polyurethane is an elastomer, cover layer thickness ranges from 0.010 to 0.070 inches and the Shore D hardness is less than 64). Because it has been admitted by the inventor of the Sullivan '893 patent that the particular chemical properties of the materials (the chemical composition) used in the construction of a golf ball lack criticality as compared to the mechanical properties (the Shore D hardness, flexural modulus, layer thickness) of those compounds used for constructing the different layers (Exhibit G at 334), one of ordinary skill in the art at the time the invention was made would find it obvious to incorporate the teachings of Wu which inherently include the teachings of Shore hardness for the fully cured cover layer as taught in Exhibit C as obvious equivalent materials in order to achieve the same end result of providing a cover layer that has the same "click" and "feel" of a balata cover which the extra durability of an elastomeric material.

This rejection of claim 1 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 3: Patent Owner's Argument

Patent Owner argues that the combination of Nesbitt and Wu is improper because: (1) the Wu patent is silent on the thickness of the polyurethane layer (Patent Owner's Response at page 20); (2) the Wu patent is silent on the Shore hardness value and in a deposition Ms. Wu

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said she could not predict what the hardness would be of a finished golf ball (Patent Owner's Response at page 20); (3) the Titleist 1 ball, which Examiner uses to disclose the proper hardness of the outer layer, or cover, because the ball's commercial literature lists the Wu patent, is not competent evidence because Wu's patent's claims are silent as to hardness (Patent Owner's Response at bottom of page 20 to top of page 21); (4) the claimed invention is the synergistic combination of features and the Examiner impermissibly uses hindsight to reassemble the ball (Patent Owner's Response at page 21); and, (5) the BPAI's divided opinion (the decision in *Ex parte Sullivan*) is not binding and the claim here is more narrow (Patent Owner's Response at page 21 to page 22).

Ground 3: Third Party Requester's Comments

As to the Patent Owner's second argument, the Third Party Requester states that Nesbitt discloses the claimed Shore D hardness value at col. 2, lines 43-49, when used with the Surlyn Data Sheet (Third Party Requester's Comments at bottom of page 23).

As to the Patent Owner's fourth argument, the Third Party Requester states that motivation to make this combination is found as stated in the opinion of *ex parte Sullivan* (Third Party Requester's Comments at middle of page 22).

As to the Patent Owner's fifth argument, the Third Party Requester states that the opinion in *Ex parte Sullivan* sets forth cogent reasoning for the combination and the differences in scope between the claims are either explicit disclosed or inherent to Nesbitt or Wu, or mere design choice (Third Party Requester's Comments at pages 22-24).

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Ground 3: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester and the rejection of claim 1 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. As to the Patent Owner's first and second arguments, Nesbitt discloses an overlapping thickness range for the outer cover of 0.020 inches to 0.100 inches (col. 3, lines 22-25) and its Shore hardness value of 55 ("Surlyn 1855" of col. 3, lines 22-25, which has a Shore D hardness of 55 (from Surlyn data sheet for Surlyn 9020)) which is less than the claimed value of 64.

As to the Patent Owner's third argument, Examiner considers the Wu patent to describe the Titleist cover because the patent and the Titleist's commercial literature have characteristics in common such as being "cut-resistant" (Wu patent at col. 2 line 41; Titleist 1's commercial literature at text above "Titleist Professional Specifications") and ball velocities of 253.0 ft./sec. (Wu patent at col. 8 Table IV; Titleist 1's commercial literature at "Titleist Professional Specifications"). These two characteristics combined with the fact that the Titleist 1 cites the Wu patent leads to the conclusion that the cover of the Titleist 1 is within the ambit of the composition claimed in the Wu patent. Hence, the Titleist 1 commercial literature accurately recites other characteristics on which the Wu patent is silent, such as Shore D hardness. Whether Wu, herself, knew the hardness of an outer layer made of her composition is not dispositive because of the commercial literature for the Titleist 1.

As to the Patent Owner's fourth and fifth arguments, the combination is proper because the Supreme Court has held that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within her or her grasp. If this leads to the

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anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion *KSR* at middle of page 17). Here, the problem of producing a golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at bottom of page 4). Polyurethane was a known solution for providing "click" and feel (Wu at col. 1 lines 40-46). Nesbitt discloses that a golf ball with his inner and outer thicknesses have both distance feel (*generally* Nesbitt at col. 1, lines 65-78, continuing to col. 2, lines 1-9). The resulting two-layer golf ball with an outer polyurethane layer had the expected results (*Sullivan* at page 12) and not, therefore, synergistic. Thus, the golf balls disclosed by the combination of Nesbitt and Wu are of ordinary skill and common sense. Since this combination has the elements cited in claim 1 of *Sullivan* '873, the decision in *Ex parte Sullivan* is supportive but not dispositive or binding.

Proposed Third Party Requester Rejection: Ground #4.

The requester submits on pages 20-22 of the request that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 1	Nesbitt (mentioning Molitor '637) and Molitor '751
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A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed on said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material..." (Nesbitt, col. 2, ll. 34-37).
said inner cover layer having a Shore D hardness of at least 60,	Nesbitt: "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.) Per the '156 Patent: "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 54-60.) <u>Exhibit I: DuPont Surlyn® Product Information: Surlyn® 8940</u> has a Shore D hardness of 65.
said inner cover layer comprising a blend of two or more low acid ionomer resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60). <u>Molitor '637</u> : Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).
an outer cover layer disposed on said inner cover layer,	"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)
said outer cover layer having a Shore D hardness of about 64 or less,	Nesbitt: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of

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	<p>this invention.” (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor ‘637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See below for Shore D hardness of 64 or less limitation explanation.</p>
a thickness of from about 0.01 to about 0.07 inches, and	<p>“It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches.” (Nesbitt, col. 3, lines 19-23.)</p>
comprising a polyurethane material.	<p><u>Nesbitt</u>: “Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention.” (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor ‘637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

As shown above in the claim chart, Nesbitt mentioning Molitor ‘637 suggests the use of a soft outer cover layer including a polyurethane material. In an analogous golf ball, Molitor ‘751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76. The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a thermoplastic

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urethane having a shore A hardness less than 95 and (2) an ionomer having a shore D hardness greater than 55.

(Molitor '751, col. 2, ll.33-49 (emphasis added)).

Moreover, in explaining what constitutes a two-piece golf ball, Molitor '751 teaches that:

The phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls have non-wound cores.

(Molitor '751, col. 3, ll. 7-12 (emphasis added)).

As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art "translates" a Shore C value to a Shore D value is by taking the known Shore hardness values with a given range, in this instance Shore C, for given materials, in this instance polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and

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the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

As stated in the request on page 22

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft outer cover layer of Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by Molitor '751 to provide a golf ball that includes "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, ll. 61-68)

This rejection of claim 1 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 4: Patent Owner's Argument

The Patent Owner argues that the rejection is improper because: (1) Molitor '751 describes the cover of his golf ball with hardness values in terms of Shore C, hence, one of ordinary skill would not look to combine this teaching with the patent of Nesbitt, with hardness values recorded in terms of Shore D, because the two hardness values, or scales, have no simple mathematical correlation (Patent Owner's Response at page 22 to page 23); and, (2) no motivation to combine Nesbitt with Molitor '751 because the Molitor '751 ball's construction is

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a hard core with a soft cover, the cover having a thickness twice the thickness of the Sullivan '873 claims and an order of magnitude softer (Patent Owner's Response at page 23).

Ground 4: Third Party Requester's Comments

Third Party Requester counter argues that, for argument (1) hardness values of Shore C and Shore D are convertible as evidenced by, *inter alia*, the Sullivan '873 patent itself (Third Party Requester's Comments at bottom of page 25). For argument (2), the Third Party Requester states that motivation to combine exists because, *inter alia*, Molitor '751, itself, states that its cover can be used with the three-piece, two-cover golf ball of Nesbitt (Third Party Requester's Comments at bottom of page 27).

Ground 4: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester, and the rejection of claim 1 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. As to the Patent Owner's first argument, Examiner specifically agrees with the Third Party Requester's comments that a correlation, or conversion, exists between the two hardness scales, Shore C and Shore D, because Sullivan '873 give a conversion of the two scales at col. 3, lines 42-43. Further, the quote used by the Patent Owner from the ASTM D-2240 standard stating that "'no simple relationship exists'" (Patent Owner's Response at middle of page 23) does not preclude a conversion factor, even if complex. Since the Supreme Court has recently held that "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton," even a complex calculation suffices to permit conversion of the two scales (slip opinion of *KSR* at

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middle of page 17). Hence, one of ordinary skill would not be deterred from use of prior art regardless of the hardness scale used to define its various layers.

As to the second argument, Examiner considers the language of the Molitor '751 that "[t]he phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls, having non-wound cores" provides motivation to combine the two references. Molitor '751 provides motivation, for example, at col. 1, lines 11-15, where it states that the invention is concerned with a "golf ball useful in making balls, particularly two-piece balls, having superior short iron and other playability characteristics."

Further, the Supreme Court has held that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within her or her grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion KSR at middle of page 17). Here, the problem of producing a golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at bottom of page 4). Polyurethane was a known solution for providing playability properties (Molitor '751 at abstract). The resulting golf ball with a polyurethane outer cover had the expected results (Sullivan '873 at abstract). Thus, the golf ball disclosed in claim 1 of Sullivan '873 is of ordinary skill and common sense.

As to the argument of different thicknesses of the layers, Nesbitt discloses the thickness of an inner layer being in a range from 0.020 inches to 0.070 inches at col. 3, lines 19-25. These

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ranges overlap the ranges of claim 1. Finally, for the argument of a Shore value of at least 60 for the inner cover, Nesbitt discloses use of "hard, highly flexural modulus resinous material such as type 1605 Surlyn" for this layer at col. 2, lines 36-39. Surlyn 1605, now Surlyn 8940, has a Shore D hardness of 65 (Third Party Requester's Comments at page 27, n.82).

Proposed Third Party Requester Rejection: Ground #5.

The requester submits on pages 22-25 that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 1	Proudfit
A golf ball comprising:	"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)
a core;	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>

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an inner cover layer disposed on said core,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)						
said inner cover layer having a Shore D hardness of at least 60,	See below with respect to Shore D hardness.						
said inner cover layer comprising a blend of two or more low acid ionomer resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>"The composition of the inner cover layer is described in Table 6."</p> <p style="text-align: center;">TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</p> <table border="1"> <thead> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodhan-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>	Ionomer Type	Blend Ratio	Sodhan-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Sodhan-Surlyn 8940	75%						
Zinc-Surlyn 9910	25%						
an outer cover layer disposed on said inner cover layer,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7,						

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	ll. 21-24)
said outer cover layer having a Shore D hardness of about 64 or less,	"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.
a thickness of from about 0.01 to about 0.07 inches, and	"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch...." (Proudfit, col. 7, ll. 40-46)
comprising a polyurethane material.	"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17)

As shown above Proudfit discloses, teaches and suggests a three-piece golf ball (core, inner layer and outer layer) with the layers within the range of claimed thicknesses each layer made from a material having the mechanical properties substantially similar to the claimed mechanical properties. What Proudfit lacks in clearly disclosing are the particular mechanical and chemical properties of the claimed invention. However, Proudfit either incorporates by reference these mechanical and chemical properties and/or the materials used within the Proudfit golf ball inherently have these mechanical and chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of this invention. (Proudfit, col. 1, ll.39-43). The '981 patent discloses the preferably amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Pat, col. 3, ll. 59-60). If Proudfit discloses using blends SURLYN the chemical for making the inner cover and the '981 Patent is the formulation for ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and SURLYN 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid. As taught from Exhibit I,

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SURLYN 8940 has a Shore D hardness of 65; SURLYN 9910 has a Shore D hardness of 64, see Exhibit I. Therefore, this cover blend inherently has a hardness of 60 or more. Proudfit discloses the outer layer being a blend of balata. An example of the blend is disclosed in Table 7 reproduced below.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	1.00
Titanium Dioxide	17.00
Ultramarine Blue color	.50
Zinc DiAcrylate	35.00
Peroxide (Varox 230 XL)	1.50
Total	180.00

Note that Trans Polyisoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore hardness of less than 64.

While Proudfit lacks disclosing the outer layer being made from polyurethane, in an analogous golf ball, Molitor '637 teaches using polyurethane, see Molitor '637, col. 5, ll. 33-41 and col. 18, examples 16 and 17. The request points out on page 25, ll. 7-15, why the use of polyurethane to one of ordinary skill in the art would be readily apparent given that those skilled in the art were more critical of the mechanical properties of a particular material than the chemical composition (material type) of the material and those remarks are incorporated herein. In other words, it was not critical to the "golf ball inventions" of those skilled in the art as to what materials were used to construct the golf balls so long as the materials had the desired

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mechanical properties which would yield the particular mechanical performance parameters the inventors were trying to achieve, e.g. improved processability; improved durability; cost effectiveness; user acceptance of performance (similar "click" and "feel" to balata) of the golf ball product made from those materials.

The request on page 25, ll. 5-22, explains why one of ordinary skill in the art would be motivated to substitute the outer cover layer taught in Molitor '637 for the outer cover layer disclosed in Proudfit:

Moreover, as recognized by the inventor himself, the particular materials used in the golf balls were not as important as the mechanical properties of those materials. (See Exhibit G at 334.) Because those skilled in the art would look to the mechanical properties of the materials when determining whether certain materials can be substituted for one another, those skilled in the art would recognize that the Estane polyurethane taught by Molitor '637 (having a flexural modulus of about 25,000 psi) and the polymeric outer cover layer material of Proudfit (which has a modulus of between 20,000 and 25,000 psi) would have been substitutable for one another. (Compare Exhibit J with Proudfit, col. 6, lines 28-31.) This would have further suggested to those skilled in the art that the soft polymeric materials taught by Molitor '637, including, for example, the relatively soft, low modulus polyurethane material of Molitor '637 would have been substitutable for the soft polymeric outer cover layer as taught by Proudfit.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the balata-based outer cover layer of Proudfit to include the polyurethane outer cover layer of Molitor '637 because polyurethane was a well known substitute to balata and gives a number of advantages over balata as would have been readily appreciated by those skilled in the art. These advantages include: (1) improved processability; (2) improved durability when compared to balata; (3) cost-effectiveness when compared to balata; and (4) having a good "click" and "feel." ... All of this would have led one of ordinary skill in the art to replace the soft, low modulus balata-based outer cover layer of Proudfit with the soft, low modulus polyurethane outer cover layer material of Molitor '637 at the time of the alleged invention.

Therefore, one of ordinary skill in the art would find the claimed invention as obvious for the motivation given in the request on page 25, ll. 5-22.

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This rejection of claim 1 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 5: Patent Owner's Argument

The Patent Owner argues that the rejection is improper because: (1) Proudfit does not describe a golf ball with an outer layer with a Shore D hardness value of 64 or less because the Hebert Declaration's analysis of the Wilson Ultra Tour (as representative of the Proudfit patent) is not correct (Patent Owner's Response at page 25); (2) the thickness of Molitor '637's cover layer cannot be combined with thickness of Proudfit's cove layer which is significantly thinner (Patent Owner's Response middle of page 27); and, (3) the rejection is impermissible hindsight reconstruction of substitution of materials when the invention, exemplified by the Titleist Pro V1, is a commercial blockbuster (Patent Owner's Response bottom of page 27).

Ground 5: Third Party Requester's Comments

Third Party Requester counter argues that, for argument (1) the Wilson Ultra Tour is representative of the Proudfit patent because both disclose a three-piece golf ball with an outer cover layer of cis-polybutadiene and synthetic balata (trans-polyisoprene), an inner layer of Na and Zn Surlins, and a compression of 100 (Third Party Requester's Comments at page 31); (2) the thickness layers in the two patents overlap hence one of ordinary skill would realize that the cover materials could be substituted (Third Party Requester's Comments at page 29); and (3) the motivation set forth in the rejection by the Examiner satisfies the requirements *KSR* and is

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consistent with the motivation to combine Nesbitt and WU identified by the BPAI (Third Party Requester's Comments at middle of page 30) and that the '873 claim does not disclose the Titleist Pro V1 golf ball (Third Party Requester's Comments at pages 34-37).

Ground 5: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester, and the rejection of claim 1 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. As to the Patent Owner's first argument, the Examiner accepts the Hebert Declaration as competent evidence because it is a sworn declaration. As such, the Examiner will not probe the Declarant's veracity. Since the Wilson Pro Tour had an outer cover made of c-polybutadiene and synthetic balata (trans-polyisoprene) with a Shore D hardness of 52 (Exhibit A of Hebert Declaration), the over cover of Proudfit is considered to have the same hardness value since its composition is the same (Proudfit at col. 8, Table 7; *see* MPEP 2112.01(II)).

As to Patent Owner's second argument, Proudfit discloses that the outer cover can be from 0.0450 to 0.0650 inches in thickness. Molitor '637 discloses an outer cover thickness of 0.060 inches or thicker (Molitor '637 at col. 5, lines 3-7). Since these values overlap in the region of 0.060 inches, one of ordinary skill would find it obvious to look to Molitor '637 for an outer cover for the golf ball of Proudfit.

As to Patent Owner's third argument, Examiner considers the language of Molitor '637 that "one skilled in the art can produce a golf ball having the desirable qualities of both Balata and Surlyn resin covered golf balls" (Molitor '637 at col. 2, lines 43-45) to provide motivation to combine the two references. One of the compositions disclosed by Molitor '637 is polyurethane

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(Molitor '637 at col. 5, lines 33-55). Therefore, one of ordinary skill, having the three-piece ball disclosed by Proudfit would look to Molitor '637 for over cover material to achieve a golf ball with the desired qualities of Balata and Surlyn.

Further, the Supreme Court has held that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within her or her grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion KSR at middle of page 17). Here, the problem of producing a golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at bottom of page 4). Polyurethane was a known solution for providing playability properties (Molitor '637 at abstract). The resulting golf ball with a polyurethane outer cover had the expected results (Sullivan '873 at abstract). Thus, the golf ball disclosed in claim 1 of Sullivan '873 is of ordinary skill and common sense.

The Examiner does not reach the argument proffered by the Patent Owner that the Titleist Pro V1 golf ball exemplifies the instant claim language.

Proposed Third Party Requester Rejection: Ground #6.

The requester submits on pages 26-27 that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

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Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 1	Proudfit						
A golf ball comprising:	"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)						
a core;	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>						
an inner cover layer disposed on said core,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)						
said inner cover layer having a Shore D hardness of at least 60,	See below with respect to Shore D hardness.						
said inner cover layer comprising a blend of two or more low acid ionomer resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>"The composition of the inner cover layer is described in Table 6."</p> <div style="text-align: center;"> <p>TABLE 6</p> <p>Composition of Inner Layer of Cover (Parts by Weight)</p> <table> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Eodum-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </table> </div> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>	Ionomer Type	Blend Ratio	Eodum-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Eodum-Surlyn 8940	75%						
Zinc-Surlyn 9910	25%						

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	<p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>
an outer cover layer disposed on said inner cover layer,	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p>
said outer cover layer having a Shore D hardness of about 64 or less,	<p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.</p>
a thickness of from about 0.01 to about 0.07 inches, and	<p>"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch...." (Proudfit, col. 7, ll. 40-46)</p>
comprising a polyurethane material.	<p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17)</p>

As expressed in the request on page 26 and identified above within the claim chart, Proudfit teaches a golf ball have a two-piece cover including a hard, ionomeric inner cover layer and a soft balata blend outer cover layer. Proudfit lacks in disclosing the use of polyurethane as

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the material for the outer cover layer. Instead, as shown in Table 7, reproduced below, Proudfit discloses the outer cover layer being made of a blend of balata.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	5.00
Titanium Dioxide	17.00
Ultramarine Blue color	.30
Zinc DiAcrylate	35.00
Peroxide (Varta 230 XL)	2.50
Total	160.00

However, those skilled in the art understand the disadvantages of balata covered golf balls. As admitted by the patent owner

Despite all the benefits of balata, balata covered golf balls are easily cut and/or damaged if mis-hit. Golf balls produced with balata or balata-containing cover compositions therefore have a relatively short lifespan.

(Sullivan '873, col. 1, ll. 39-42). The next step in golf ball cover technology to overcome the problems with balata was the use of SURLYN as an outer cover. However, as described in the request on page 26 Wu teaches the problem with SURLYN as a outer cover on a golf ball.

The problem with SURLYN covered golf balls ... is that they lack the "click" and "feel" which golfers had become accustomed to with balata. "Click" is the sound when the ball is hit by a golf club and "feel" is the overall sensation imparted to the golfer when the ball is hit.

It has been proposed to employ polyurethane as a cover stock for golf balls because, like SURLYN, it has a relatively low price compared to balata and provides superior cut resistance over balata. **However, unlike SURLYN covered golf balls, polyurethane-covered golf balls can be made to have the "click" and "feel" of balata.**

(Wu col. 1, ll. 36-46 (emphasis added)).

As explained in the request on page 26 through page 27 those skilled in the art at the time the claimed invention was made were more critical of the mechanical properties of the materials

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that constructed the layers which impacted the performance of the golf ball more than the materials themselves. See Exhibit G. As identified above Proudfit lacks disclosing polyurethane as the outer cover layer. In analogous golf ball device, Wu's polyurethane material inherently has a flexural modulus of 23,000 psi as averred within the Rule 132 Declaration of Jeffrey L. Dalton at para. 7. Proudfit's outer cover layer material is disclosed as having a flexural modulus of between about 20,000 psi and 25,000 psi. (Proudfit, col. 6, ll. 28-31) Thus, Wu's cover material's flexural modulus falls within the range of Proudfit's cover material. Moreover, Wu's polyurethane material inherently has a Shore D hardness of about 58. See Decl. of Dalton at para. 6. Thus, as evidenced by this declaration, Wu's polyurethane material falls within the claimed range of the outer layer material have a Shore D hardness of less than 64.

Thus, as pointed out in the request on page 27, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute Wu's polyurethane golf ball cover material for Proudfit's balata-blend cover material for the advantages described in this part of the request which is quoted below:

Based on Wu's teachings, one of ordinary skill in the art would have recognized the substitutability of soft polyurethane for soft balata-based materials and the advantages of making such a substitution. These advantages include (1) low price compared to balata; (2) better cut resistance when compared to balata; and (3) a "click" and "feel" that is similar to balata. Moreover, the replacing the balata-material taught by Proudfit would have been obvious to those skilled in the art prior to November 9, 1995 because before that time, the Titleist ProfessionalTM golf ball, which had used Wu's polyurethane material, had replaced balata-covered balls as the market leader. (See Decl. of Jeffrey L. Dalton at ¶¶ 3-4.) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the alleged invention to modify Proudfit's golf ball by replacing the soft balata-based outer cover layer with an outer cover layer made of soft polyurethane material because Wu's polyurethane material has similar mechanical properties and provides numerous advantages over balata while exhibiting the "click" and "feel" of balata.

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This rejection of claim 1 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 6: Patent Owner's Argument

The Patent Owner argues that the rejection is improper because: (1) while the patent of Wu describes the use of polyurethane as an outer cover, it discloses neither the thickness nor the Shore D hardness of this polyurethane layer (Patent Owner Response at middle of page 28); (2) Wu, herself, at her deposition could not predict the final hardness value of her cover (Patent Owner Response at page 28); (3) the Dalton Declaration is not competent evidence of the hardness value of Wu's polyurethane layer (Patent Owner Response at page 28); and, (4) no motivation to combine the references, absent hindsight, because motivation to try, *i.e.*, to substitute one material for another, is not the standard (Patent Owner Response at top of page 29).

Ground 6: Third Party Requester's Comments

Third Party Requester counter argues that, for argument (4), applying the standard of *KSR* would result in one of ordinary skill using polyurethane as a golf ball cover since it had been known for decades as an excellent golf ball material (Third Party Requester's Comments at page 32). Further, the rationale of *Ex parte Sullivan* would equally apply here (Third Party Requester's Comments at page 32).

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Ground 6: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester, and the rejection of claim 1 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. As to the Patent Owner's first, second, and third argument, the Examiner accepts the Dalton Declaration as competent evidence because it is a sworn declaration. As such, the Examiner will not probe the Declarant's veracity. Hence, the Shore D hardness value for Wu's cover is considered to be 58. The thickness of the outer cover is found in Proudfit where it is disclosed that the thickness can be from 0.0450 to 0.0650 inches (Proudfit at col. 7, lines 40-47). Wu's deposition is not dispositive, here, because of the Dalton Declaration.

As to Patent Owner's fourth argument, Examiner considers the language of Wu, itself, to provide motivation to combine because golf balls made with polyurethane possess "improved shear resistance and cut resistance compared to golf balls having covers made from either balata or SURLYN" (Wu at col. 2, lines 29-32). Also, golf balls with polyurethane covers "can be made to have the "click" and "feel" of balata" (Wu at col. 1, lines 44-46). Therefore, one of ordinary skill, having the three-piece ball disclosed by Proudfit would look to Wu for outer cover material to achieve a golf ball with the desired qualities of Balata and Surllyn.

Further, the Supreme Court has held that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within her or her grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense" (slip opinion *KSR* at middle of page 17). Here, the problem of producing a golf ball with distance, durability, "click," and feel was known (Patent Owner's Response at

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bottom of page 4). Polyurethane was a known solution for providing playability properties (Wu at col. 1 lines 27-46). The resulting golf ball with a polyurethane outer cover had the expected results (Sullivan '873 at abstract). Thus, the golf ball disclosed in claim 1 of Sullivan '873 is of ordinary skill and common sense.

Finally, the Court has explicitly approved of the "obvious to try" standard for combinations as above (slip opinion *KSR* at middle of page 17).

Proposed Third Party Requester Rejection: Ground #7.

The requester submits on pages 27-29 that claim 1 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 1	Proudfit
A golf ball comprising:	"This invention relates to golf balls , and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)
a core;	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core</p>

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	was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)								
an inner cover layer disposed on said core,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)								
said inner cover layer having a Shore D hardness of at least 60,	See below with respect to Shore D hardness.								
said inner cover layer comprising a blend of two or more low acid ionomer resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>"The composition of the inner cover layer is described in Table 6."</p> <div> <table> <tr> <th colspan="2">TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</th></tr> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Sodium-Surlin 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlin 9910</td><td>25%</td></tr> </table> </div> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>	TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)		Ionomer Type	Blend Ratio	Sodium-Surlin 8940	75%	Zinc-Surlin 9910	25%
TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)									
Ionomer Type	Blend Ratio								
Sodium-Surlin 8940	75%								
Zinc-Surlin 9910	25%								

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an outer cover layer disposed on said inner cover layer,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)
said outer cover layer having a Shore D hardness of about 64 or less,	"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.
a thickness of from about 0.01 to about 0.07 inches, and	"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch...." (Proudfit, col. 7, ll. 40-46)
comprising a polyurethane material.	"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17)

As expressed in the request on page 27 and identified above within the claim chart, Proudfit teaches a golf ball have a two-piece cover including a hard, ionomeric inner cover layer and a soft balata blend outer cover layer. Proudfit lacks in disclosing the use of polyurethane as the material for the outer cover layer. Instead, as shown in Table 7, reproduced below, Proudfit discloses the outer cover layer being made of a blend of balata.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	80.00
Polybutadiene	40.00
Zinc Oxide	5.00
Titanium Dioxide	17.00
Ultramarine Blue color	30
Zinc DiAcrylate	35.00
Peroxide (Varon 230 XL)	2.50
Total	160.00

However, those skilled in the art understand the disadvantages of balata covered golf balls. As admitted by the patent owner:

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[d]espite all the benefits of balata, balata covered golf balls are easily cut and/or damaged if mis-hit. Golf balls produced with balata or balata-containing cover compositions therefore have a relatively short lifespan.

(Sullivan '873, col. 1, ll. 39-42). With this disadvantage of balata covered golf balls, golf ball designers looked for materials that would provide the same "click" and "feel" golfers expected and have increased durability.

As pointed out in the request on page 28, lines 1-4, in an analogous golf ball, Molitor '751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a **cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76.** The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a **thermoplastic urethane having a shore A hardness less than 95** and (2) an ionomer having a shore D hardness greater than 55. The ionomer comprises olefinic groups having two to four carbon atoms copolymerized with acrylic or methacrylic acid groups and cross-linked with metal ions, preferably sodium or zinc ions. **The primary components of the blended cover are set at a weight ratio so as to result in a cover material after molding having a shore C hardness within the range of 70 to 85, preferably 72 to 76.** Preferably, the urethane component of the cover material has a tensile strength greater than 2500 psi and an elongation at break greater than 250%. A preferred cover material comprises about 8 parts of the thermoplastic urethane and between 1 and 4 parts ionomer. Preferably, the cover is no greater than 0.060 inch thick. Thinner covers appear to maximize the short iron playability characteristics of the balls.

(Molitor '751, col. 33-57 (emphasis added)). Thus, Molitor '751 teaches having a outer cover layer with a Shore C hardness less than 85 and preferably between 72 and 76. Moreover, Molitor '751 teaches what golf balls are included in the definition of "two-piece" ball within its instant specification.

The phrase "two-piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls having non-wound cores.

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Molitor '751, col. 3, ll. 7-12 (emphasis added)). Proudfit, likewise, teaches the two-piece golf balls can fit within this definition.

FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.

(Proudfit, col. 7, ll. 21-24).

As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art "translates" a Shore C value to a Shore D value is by taking the known Shore hardness values with a given range, in this instance Shore C, for given materials, in this instance a polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This

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is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

As stated in the request on page 29

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft outer cover layer of Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by Molitor '751 to provide a golf ball that includes "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, ll. 61-68)

This rejection of claim 1 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 7: Patent Owner's Argument

The Patent Owner argues that the rejection is improper because: (1) Molitor '751 describes the cover of his golf ball with hardness values in terms of Shore C, hence, one of ordinary skill would not look to combine this teaching with the patent of Proudfit to have a ball with Shore D hardness values, because the two hardness values, or scales, have no simple mathematical correlation (Patent Owner's Response at middle of page 29); and, (2) no motivation to combine Proudfit with Molitor '751 because the Molitor '751 ball's construction is different than that of the claimed golf balls (Patent Owner's Response at bottom of page 29 continuing to top of page 30).

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Ground 7: Third Party Requester's Comments

Third Party Requester counter argues that, for argument (1) hardness values of Shore C and Shore D are convertible as evidenced by many published methods (Third Party Requester's Comments at page 33). For argument (2), the Third Party Requester states that motivation to combine exists because Molitor '751, itself, states that its cover can be used with the three-piece golf balls (Third Party Requester's Comments at top of page 34).

Ground 7: Examiner's Response to the Argument and Comments

Examiner agrees with the comments of the Third Party Requester, and the rejection of claim 1 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. As to the Patent Owner's first argument, Examiner agrees with the Third Party Requester's comments that a correlation, or conversion, exists between the two hardness scales, Shore C and Shore D, because, *inter alia*, Sullivan '873 give a conversion of the two scales at col. 3, lines 42-43. Hence, one of ordinary skill would not be deterred from use of prior art regardless of the hardness scale used to define its various layers.

As to the second argument, Examiner considers the language of the Molitor '751 that "[t]he phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls, having non-wound cores" provides motivation to combine the two references. Proudfit, like Nesbitt, disclose golf balls with a core, inner cover, and outer cover. Molitor '751 provides motivation, for example, at col. 1, lines 11-15, where it states that the invention is concerned with a "golf ball useful in making

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balls, particularly two-piece balls, having superior short iron and other playability characteristics.”

Further, the Supreme Court has held that “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within her or her grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense” (slip opinion *KSR* at middle of page 17). Here, the problem of producing a golf ball with distance, durability, “click,” and feel was known (Patent Owner’s Response at bottom of page 4). Polyurethane was a known solution for providing playability properties (Molitor ‘751 at abstract). The resulting golf ball with a polyurethane outer cover had the expected results (Sullivan ‘873 at abstract). Thus, the golf ball disclosed in claim 1 of Sullivan ‘873 is of ordinary skill and common sense.

Re. Claim 2

Proposed Third Party Requester Rejection: Ground #8.

The requester submits on pages 29-30 that claim 2 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Claim 2 is rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt (incorporating by reference Molitor ‘637).

Below is a claim chart identifying the claim limitations and where Nesbitt (incorporating by reference Molitor ‘637) discloses the claim limitations.

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Claim 2	Nesbitt (incorporating by reference Molitor '637)
The golf ball of claim 1 wherein	See above.
said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

This rejection of claim 2 based on Nesbitt (incorporating by reference Molitor '637) was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 8: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 8: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

Ground 8: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #9.

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In the alternative, the requester submits on page 30 that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 2	Nesbitt
The golf ball of claim 1 wherein said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

This rejection of claim 2 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 9: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 9: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

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Ground 9: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 2 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #10.

The requester submits on page 30 of the request that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 2	Nesbitt
The golf ball of claim 1 wherein said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surllyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

This rejection of claim 2 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

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Ground 10: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 10: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 10: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 2 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #11.

The requester submits on page 30 of the request that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 2	Nesbitt
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The golf ball of claim 1 wherein	See above.
said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

This rejection of claim 2 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 11: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 11: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 11: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 2 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejections: Ground #12-14.

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The requester submits on page 30 that claim 2 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637); Wu, U.S. Pat. No. 5,334,673 (Wu); or Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

These rejections are not adopted for the reasons given in below.

Claim 2 requires the outer layer thickness to be in the range of about 0.01 to about 0.05 inches. Proudfit's preferred outer layer thickness embodiment is 0.0525 inches thick. See Proudfit, col. 7, ll. 40-46. Therefore, Proudfit's preferred embodiment is outside the claimed range. Further, the difference between Proudfit's preferred embodiment and the claimed invention's upper range limit is 0.0025 inches or twenty-five thousandths of an inch. This difference equates to approximately a factor of 4. The requester admits that it is not the chemical but mechanical properties of the materials used in making golf balls which is important to those skilled in the art. One of the mechanical properties in constructing a golf ball with materials is the thickness to make a given layer. For these reasons, one skilled in the art would not find obvious the claimed invention of claim when viewing Proudfit with Molitor '637, Wu or Molitor '751. Note that Molitor '637, Wu or Molitor '751 lack curing the deficiencies of Proudfit with respect to the instant claimed invention.

Re. Claim 3

Proposed Third Party Requester Rejection: Ground #15.

The requester submits on pages 30-31 that claim 3 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

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This rejection is adopted in this office action.

Claim 3 is rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt (incorporating by reference Molitor '637).

Below is a claim chart identifying the claim limitations and where Nesbitt (incorporating by reference Molitor '637) discloses the claim limitations.

Claim 3	Nesbitt (incorporating by reference Molitor '637)
The golf ball of claim 1 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)

This rejection of claim 3 based on Nesbitt incorporating by reference Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 15: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 15: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

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Ground 15: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #16.

In the alternative, the requester submits on page 31 that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 3	Nesbitt
The golf ball of claim 1 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)

This rejection of claim 3 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

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Ground 16: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 16: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 16: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 3 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #17.

The requester submits on page 31 of the request that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 3	Nesbitt
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The golf ball of claim 1 wherein	See above.
said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	<p>"The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.)</p> <p>"The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)</p>

This rejection of claim 3 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 17: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 17: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 17: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 3 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #18.

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The requester submits on page 30 of the request that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 3	Nesbitt
The golf ball of claim 1 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3; ll. 39-40.)

This rejection of claim 3 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 18: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 18: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

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Ground 18: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 3 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #19.

The requester submits on pages 31-32 that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 3	Proudfit
The golf ball of claim 1 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch ..." (Proudfit, col. 7, ll. 40-46.)

This rejection of claim 3 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

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Ground 19: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 19: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 19: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 3 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #20.

The requester submits on pages 31-32 that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 3	Proudfit
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The golf ball of claim 1 wherein	See above.
said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch ..." (Proudfit, col. 7, ll. 40-46.)

This rejection of claim 3 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 20: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 20: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 20: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 3 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #21.

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The requester submits on pages 31-32 that claim 3 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 3	Proudfit
The golf ball of claim 1 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch ..." (Proudfit, col. 7, ll. 40-46.)

This rejection of claim 3 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 21: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 21: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 21: Examiner's Response to the Argument and Comments

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Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 3 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

Re. Claim 4

Proposed Third Party Requester Rejection: Ground #22.

The requester submits on pages 33-36 that claim 4 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Claim 4 is rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt (incorporating by reference Molitor '637).

Below is a claim chart identifying the claim limitations and which reference Nesbitt (incorporating by reference Molitor '637) discloses the claim limitations.

Claim 4	Nesbitt (incorporating by reference Molitor '637)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed about said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).

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<p>said inner cover layer having a Shore D hardness of at least 60,</p>	<p><u>Nesbitt</u>: "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p><u>Per the '156 Patent</u>: "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 46-48.)</p> <p><u>Exhibit I</u>: DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.</p>
<p>said inner cover layer comprising a blend of two or more ionomeric resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and</p>	<p>"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
<p>an outer cover layer disposed on said inner cover layer,</p>	<p>"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)</p>
<p>said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and</p>	<p>"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)</p>
<p>comprising a polyurethane material.</p>	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

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As mentioned above, Nesbitt incorporating by reference Molitor '637 describes a number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Also, as mentioned above, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64.

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Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 4 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 22: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 22: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

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Ground 22: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #23.

In the alternative, the requester submits on pages 33-36 that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 4	Nesbitt (primary) with Molitor '637 (teaching)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed about said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).

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<p>said inner cover layer having a Shore D hardness of at least 60,</p>	<p><u>Nesbitt</u>: "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p><u>Per the '156 Patent</u>: "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 46-48.)</p> <p><u>Exhibit I</u>: DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.</p>
<p>said inner cover layer comprising a blend of two or more ionomeric resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and</p>	<p>"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
<p>an outer cover layer disposed on said inner cover layer,</p>	<p>"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)</p>
<p>said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and</p>	<p>"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)</p>
<p>comprising a polyurethane material.</p>	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

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As mentioned above, Nesbitt references Molitor '637 as describing an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Also, as mentioned above, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64.

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Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

Because it appears that to one of ordinary skill in the art at the time the invention was created that the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 4 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 23: Patent Owner's Argument

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Patent Owner does not specifically argue this rejection.

Ground 23: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 23: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #24.

The requester submits on pages 36-38 of the request that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Wu discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

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Claim 4	Nesbitt mentioning Molitor '637 with Wu (teaching)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed about said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).
said inner cover layer having a Shore D hardness of at least 60,	<u>Nesbitt</u> : "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.) <u>Per the '156 Patent</u> : "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 46-48.) <u>Exhibit I</u> : DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.
said inner cover layer comprising a blend of two or more ionomeric resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60). <u>Molitor '637</u> : Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).
an outer cover layer disposed on said inner cover layer,	"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)
said outer cover layer having a thickness of from about 0.01 to	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605,

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about 0.07 inches, and	is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
comprising a polyurethane material.	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p> <p><u>Wu</u>: "[t]he present invention is a golf ball product made from a polyurethane prepolymer cured with a slow-reacting curing agent selected from the group of slow-reacting polyamine curing agents or difunctional glycols. The term "golf ball product" as used in the specification and claims means a cover, a core, a center or a one-piece golf ball. The cover of a golf ball made in accordance with the present invention has been found to have good shear resistance, cut resistance, durability and resiliency. Preferably, the polyurethane composition of the present invention is used to make the cover of a golf ball." (Wu, col. 2, ll. 33-44).</p>

As mentioned above, Nesbitt mentioning Molitor '637 teaches the use of particular polyurethane materials for the use as an outer layer. Wu teaches that polyurethane was being used as the outer layer of golf ball *circa* 1993. Wu further teaches in col. 1:36-46 that SURLYN covered golf balls lack the "click" and "feel" of balata which golfers have become accustomed to such sensations and polyurethane covered golf balls can be made to have a similar "click" and "feel" of balata. Wu also at least teaches that polyurethanes made according to its invention will have Shore D hardness directly proportional to the degree of cure of the cover; and this Shore D hardness ranges from 10 to 30, preferably 12 to 20 on the Shore D scale, see col. 6:26-38. This

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teaching of Shore D hardness is directed to an intermediate curing step product prior to the final molding process to finish the golf ball. Exhibit C demonstrates the actual finished golf ball product having the cover layer that Wu teaches within its disclosure. Exhibit C teaches that the golf ball taught therein is covered by the following patents: 4,783,078; 4,846,910; 4,858,923; 4,904,320; 4,915,390; 5,007,594; 5,080,367; 5,133,509; 5,334,673; and D339,074. The '673 Patent teaches the cover sock of the Exhibit C finished golf ball. Exhibit C teaches that the golf ball taught therein has a cover material made from an "elastomer", having a thickness of .050", and 58 Shore D hardness. All three properties are within the range of mechanical properties of the claim invention (polyurethane is an elastomer, cover layer thickness ranges from 0.010 to 0.070 inches and the Shore D hardness is less than 64). Because it has been admitted by the inventor of the Sullivan '893 patent that the particular chemical properties of the materials (the chemical composition) used in the construction of a golf ball lack criticality as compared to the mechanical properties (the Shore D hardness, flexural modulus, layer thickness) of those compounds used for constructing the different layers (Exhibit G at 334), one of ordinary skill in the art at the time the invention was made would find it obvious to incorporate the teachings of Wu which inherently include the teachings of Shore hardness for the fully cured cover layer as taught in Exhibit C as obvious equivalent materials in order to achieve the same end result of providing a cover layer that has the same "click" and "feel" of a balata cover which the extra durability of an elastomeric material.

This rejection of claim 4 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

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Ground 24: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 24: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 24: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #25.

The requester submits on pages 38-39 of the request that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it

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needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 4	Nesbitt mentioning Molitor '637
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core;	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed about said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).
said inner cover layer having a Shore D hardness of at least 60,	<u>Nesbitt</u> : "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.) <u>Per the '156 Patent</u> : "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 54-60.) <u>Exhibit I</u> : DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.
said inner cover layer comprising a blend of two or more ionomeric resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60). <u>Molitor '637</u> : Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).
an outer cover layer disposed on said inner cover layer,	"An outer layer , ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2,

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	ll. 43-47.)
said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
comprising a polyurethane material.	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

As shown above in the claim chart, Nesbitt mentioning Molitor '637 suggests the use of a soft outer cover layer including a polyurethane material. In an analogous golf ball, Molitor '751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76. The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a thermoplastic urethane having a shore A hardness less than 95 and (2) an ionomer having a shore D hardness greater than 55.

(Molitor '751, col. 2, ll.33-49 (emphasis added)).

Moreover, in explaining what constitutes a two-piece golf ball, Molitor '751 teaches that:

The phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls have non-wound cores.

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(Molitor '751, col. 3, ll. 7-12 (emphasis added)).

As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art "translates" a Shore C value to a Shore D value is by taking the known Shore hardness values with a given range, in this instance Shore C, for given materials, in this instance polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

As stated in the request on page 39

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It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft outer cover layer of Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by Molitor '751 to provide a golf ball that includes "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, ll. 61-68)

This rejection of claim 4 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 25: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 25: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 25: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 3 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #26.

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The requester submits on pages 40-43 that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 4	Proudfit
A golf ball comprising:	"This invention relates to golf balls , and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)
a core;	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>
an inner cover layer disposed about said core,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)
said inner cover layer having a Shore D hardness of at least 60,	See below with respect to Shore D hardness.
said inner cover layer comprising a blend of two or more ionomeric resins, each containing no more than 16% by weight of an alpha,	"The composition of the inner cover layer is described in Table 6."

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<p>beta-unsaturated carboxylic acid; and</p>	<p style="text-align: center;">TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</p> <table border="1"> <thead> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>	Ionomer Type	Blend Ratio	Sodium-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium-Surlyn 8940	75%						
Zinc-Surlyn 9910	25%						
<p>an outer cover layer disposed on said inner cover layer,</p>	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p>						
<p>said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and</p>	<p>"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch...." (Proudfit, col. 7, ll. 40-46)</p>						
<p>comprising a polyurethane material.</p>	<p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17)</p>						

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As shown above Proudfit discloses, teaches and suggests a three-piece golf ball (core, inner layer and outer layer) with the layers within the range of claimed thicknesses each layer made from a material having the mechanical properties substantially similar to the claimed mechanical properties. What Proudfit lacks in clearly disclosing are the particular mechanical and chemical properties of the claimed invention. However, Proudfit either incorporates by reference these mechanical and chemical properties and/or the materials used within the Proudfit golf ball inherently have these mechanical and chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of this invention. (Proudfit, col. 1, ll.39-43). The '981 patent discloses the preferably amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Pat, col. 3, ll. 59-60). If Proudfit discloses using blends SURLYN the chemical for making the inner cover and the '981 Patent is the formulation for ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and SURLYN 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid. As taught from Exhibit I, SURLYN 8940 has a Shore D hardness of 65; SURLYN 9910 has a Shore D hardness of 64, see Exhibit I. Therefore, this cover blend inherently has a hardness of 60 or more. Proudfit discloses the outer layer being a blend of balata. An example of the blend is disclosed in Table 7 reproduced below.

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TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	50.00
Polybutadiene	40.00
Zinc Oxide	5.00
Titanium Dioxide	17.00
Ultramarine Blue color	.50
Zinc DiAcrylate	33.00
Peroxide (Varox 230 XL)	1.50
Total	160.00

Note that Trans Polyisoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore hardness of less than 64.

While Proudfit lacks disclosing the outer layer being made from polyurethane, in an analogous golf ball, Molitor '637 teaches using polyurethane, see Molitor '637, col. 5, ll. 33-41 and col. 18, examples 16 and 17. The request points out on page 25, ll. 7-15, why the use of polyurethane to one of ordinary skill in the art would be readily apparent given that those skilled in the art were more critical of the mechanical properties of a particular material than the chemical composition (material type) of the material and those remarks are incorporated herein. In other words, it was not critical to the "golf ball inventions" of those skilled in the art as to what materials were used to construct the golf balls so long as the materials had the desired mechanical properties which would yield the particular mechanical performance parameters the inventors were trying to achieve, e.g. improved processability; improved durability; cost effectiveness; user acceptance of performance (similar "click" and "feel" to balata) of the golf ball product made from those materials.

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The request on page 25, ll. 5-22, explains why one of ordinary skill in the art would be motivated to substitute the outer cover layer taught in Molitor '637 for the outer cover layer disclosed in Proudfit:

Moreover, as recognized by the inventor himself, the particular materials used in the golf balls were not as important as the mechanical properties of those materials. (See Exhibit G at 334.) Because those skilled in the art would look to the mechanical properties of the materials when determining whether certain materials can be substituted for one another, those skilled in the art would recognize that the Estane polyurethane taught by Molitor '637 (having a flexural modulus of about 25,000 psi) and the polymeric outer cover layer material of Proudfit (which has a modulus of between 20,000 and 25,000 psi) would have been substitutable for one another. (Compare Exhibit J with Proudfit, col. 6, lines 28-31.) This would have further suggested to those skilled in the art that the soft polymeric materials taught by Molitor '637, including, for example, the relatively soft, low modulus polyurethane material of Molitor '637 would have been substitutable for the soft polymeric outer cover layer as taught by Proudfit.

What the requests states on pages 42 and 43 is incorporated herein as additional reasoning why one of ordinary skill in the art would be motivated to provide the above substitution.

Moreover, the request concludes with on page 43:

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the balata-based outer cover layer of Proudfit to include the polyurethane outer cover layer of Molitor '637 because polyurethane was a well known substitute to balata and gives a number of advantages over balata as would have been readily appreciated by those skilled in the art. These advantages include: (1) improved processability; (2) improved durability when compared to balata; (3) cost-effectiveness when compared to balata; and (4) having a good "click" and "feel." ... All of this would have led one of ordinary skill in the art to replace the soft, low modulus balata-based outer cover layer of Proudfit with the soft, low modulus polyurethane outer cover layer material of Molitor '637 at the time of the alleged invention.

Therefore, one of ordinary skill in the art would find the claimed invention as obvious for the motivation given in the request on page 25, ll. 5-22 and pages 42-43.

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This rejection of claim 4 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 26: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 26: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 26: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #27.

The requester submits on pages 43-44 that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

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Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 4	Proudfit						
A golf ball comprising:	"This invention relates to golf balls , and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)						
a core;	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>						
an inner cover layer disposed about said core,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)						
said inner cover layer having a Shore D hardness of at least 60,	See below with respect to Shore D hardness.						
said inner cover layer comprising a blend of two or more ionomeric resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>"The composition of the inner cover layer is described in Table 6."</p> <table border="1"> <caption>TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</caption> <thead> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium-Surlin 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlin 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>	Ionomer Type	Blend Ratio	Sodium-Surlin 8940	75%	Zinc-Surlin 9910	25%
Ionomer Type	Blend Ratio						
Sodium-Surlin 8940	75%						
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	<p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>
an outer cover layer disposed on said inner cover layer,	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p>
said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and	<p>"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch...." (Proudfit, col. 7, ll. 40-46)</p>
comprising a polyurethane material.	<p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17)</p>

As expressed in the request on page 43 and identified above within the claim chart, Proudfit teaches a golf ball have a two-piece cover including a hard, ionomeric inner cover layer and a soft balata blend outer cover layer. Proudfit lacks in disclosing the use of polyurethane as the material for the outer cover layer. Instead, as shown in Table 7, reproduced below, Proudfit discloses the outer cover layer being made of a blend of balata.

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TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	5.00
Titanium Dioxide	17.00
Ultramarine Blue color	.50
Zinc DiAcrylate	35.00
Peroxide (Varco 230 XL)	2.50
Total	160.00

However, those skilled in the art understand the disadvantages of balata covered golf balls. As admitted by the patent owner

Despite all the benefits of balata, balata covered golf balls are easily cut and/or damaged if mis-hit. Golf balls produced with balata or balata-containing cover compositions therefore have a relatively short lifespan.

(Sullivan '873, col. 1, ll. 39-42). The next step in golf ball cover technology to overcome the problems with balata was the use of SURLYN as an outer cover. However, as described in the request on page 26 Wu teaches the problem with SURLYN as a outer cover on a golf ball.

The problem with SURLYN covered golf balls ... is that they lack the "click" and "feel" which golfers had become accustomed to with balata. "Click" is the sound when the ball is hit by a golf club and "feel" is the overall sensation imparted to the golfer when the ball is hit.

It has been proposed to employ polyurethane as a cover stock for golf balls because, like SURLYN, it has a relatively low price compared to balata and provides superior cut resistance over balata. **However, unlike SURLYN covered golf balls, polyurethane-covered golf balls can be made to have the "click" and "feel" of balata.**

(Wu col. 1, ll. 36-46 (emphasis added)).

As explained in the request on page 44 those skilled in the art at the time the claimed invention was made were more critical of the mechanical properties of the materials that constructed the layers which impacted the performance of the golf ball more than the materials themselves. See Exhibit G. As identified above Proudfit lacks disclosing polyurethane as the

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outer cover layer. In analogous golf ball device, Wu's polyurethane material inherently has a flexural modulus of 23,000 psi as averred within the Rule 132 Declaration of Jeffrey L. Dalton at para. 7. Proudfit's outer cover layer material is disclosed as having a flexural modulus of between about 20,000 psi and 25,000 psi. (Proudfit, col. 6, ll. 28-31) Thus, Wu's cover material's flexural modulus falls within the range of Proudfit's cover material. Moreover, Wu's polyurethane material inherently has a Shore D hardness of about 58. See Decl. of Dalton at para. 6. Thus, as evidenced by this declaration, Wu's polyurethane material falls within the claimed range of the outer layer material have a Shore D hardness of less than 64.

Thus, as pointed out in the request on page 44, one of ordinary skill in the-art at the time the invention was made would find it obvious to substitute Wu's polyurethane golf ball cover material for Proudfit's balata-blend cover material for the advantages described in this part of the request which is quoted below:

Based on Wu's teachings, one of ordinary skill in the art would have recognized the substitutability of soft polyurethane for soft balata-based materials and the advantages of making such a substitution. These advantages include (1) low price compared to balata; (2) better cut resistance when compared to balata; and (3) a "click" and "feel" that is similar to balata. Moreover, the replacing the balata-material taught by Proudfit would have been obvious to those skilled in the art prior to November 9, 1995 because before that time, the Titleist ProfessionalTM golf ball, which had used Wu's polyurethane material, had replaced balata-covered balls as the market leader. (See Decl. of Jeffrey L. Dalton at ¶¶ 3-4.) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the alleged invention to modify Proudfit's golf ball by replacing the soft balata-based outer cover layer with an outer cover layer made of soft polyurethane material because Wu's polyurethane material has similar mechanical properties and provides numerous advantages over balata while exhibiting the "click" and "feel" of balata.

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This rejection of claim 4 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 27: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 27: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 27: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #28.

The requester submits on pages 45-46 that claim 4 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

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Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 4	Proudfit						
A golf ball comprising:	"This invention relates to golf balls , and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)						
a core;	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>						
an inner cover layer disposed about said core,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)						
said inner cover layer having a Shore D hardness of at least 60,	See below with respect to Shore D hardness.						
said inner cover layer comprising a blend of two or more ionomeric resins, each containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and	<p>"The composition of the inner cover layer is described in Table 6."</p> <table border="1"> <caption>TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</caption> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Eodhuc- Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc- Surlyn 9910</td><td>25%</td></tr> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>	Ionomer Type	Blend Ratio	Eodhuc- Surlyn 8940	75%	Zinc- Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Eodhuc- Surlyn 8940	75%						
Zinc- Surlyn 9910	25%						

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	<p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>
an outer cover layer disposed on said inner cover layer,	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p>
said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and	<p>"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch...." (Proudfit, col. 7, ll. 40-46)</p>
comprising a polyurethane material.	<p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17)</p>

As expressed in the request on page 45 and identified above within the claim chart, Proudfit teaches a golf ball have a two-piece cover including a hard, ionomeric inner cover layer and a soft balata blend outer cover layer. Proudfit lacks in disclosing the use of polyurethane as the material for the outer cover layer. Instead, as shown in Table 7, reproduced below, Proudfit discloses the outer cover layer being made of a blend of balata.

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TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	80.00
Polybutadiene	40.00
Zinc Oxide	5.00
Titanium Dioxide	17.00
Ultramarine Blue color	50
Zinc DiAcrylate	35.00
Peroxide (Varox 220 XL)	2.50
Total	180.00

However, those skilled in the art understand the disadvantages of balata covered golf balls. As admitted by the patent owner:

[d]espite all the benefits of balata, balata covered golf balls are easily cut and/or damaged if mis-hit. Golf balls produced with balata or balata-containing cover compositions therefore have a relatively short lifespan.

(Sullivan '873, col. 1, ll. 39-42). With this disadvantage of balata covered golf balls, golf ball designers looked for materials that would provide the same "click" and "feel" golfers expected and have increased durability.

As pointed out in the request on page 45, lines 12-16, in an analogous golf ball, Molitor '751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76. The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a thermoplastic urethane having a shore A hardness less than 95 and (2) an ionomer having a shore D hardness greater than 55. The ionomer comprises olefinic groups having two to four carbon atoms copolymerized with acrylic or methacrylic acid groups and cross-linked with metal ions, preferably sodium or zinc ions. The primary components of the blended cover are set at a weight ratio so as to result in a cover material after molding having a shore C hardness within the range of 70 to 85, preferably 72 to 76. Preferably, the urethane component of the cover material has a tensile strength greater than 2500 psi and an elongation at break greater than 250%. A preferred cover material comprises about 8 parts of the thermoplastic urethane and between 1 and 4 parts ionomer. Preferably, the cover

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is no greater than 0.060 inch thick. Thinner covers appear to maximize the short iron playability characteristics of the balls.

(Molitor '751, col. 33-57 (emphasis added)). Thus, Molitor '751 teaches having a outer cover layer with a Shore C hardness less than 85 and preferably between 72 and 76. Moreover, Molitor '751 teaches what golf balls are included in the definition of "two-piece" ball within its instant specification.

The phrase "two-piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, **but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls having non-wound cores.**

Molitor '751, col. 3, ll. 7-12 (emphasis added)). Proudfit, likewise, teaches the two-piece golf balls can fit within this definition.

FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.

(Proudfit, col. 7, ll. 21-24).

As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore

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C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art “translates” a Shore C value to a Shore D value is by taking the known Shore hardness values with a given range, in this instance Shore C, for given materials, in this instance a polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

As stated in the request on page 46

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft outer cover layer of Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by Molitor ‘751 to provide a golf ball that includes “playability properties as good or better than balata-covered wound balls but are significantly more durable,” and “have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot” while having improved puttability. (Molitor ‘751, col. 2, ll. 61-68)

This rejection of claim 4 based on Proudfit in view of Molitor ‘751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 28: Patent Owner’s Argument

Patent Owner does not specifically argue this rejection.

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Ground 28: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 28: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 4 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

Re. Claim 5

Proposed Third Party Requester Rejection: Ground #29.

The requester submits on page 47 that claim 5 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Claim 5 is rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt (incorporating by reference Molitor '637).

Below is a claim chart identifying the claim limitations and where Nesbitt (incorporating by reference Molitor '637) discloses the claim limitations.

Claim 5	Nesbitt (incorporating by reference Molitor '637)
The golf ball of claim 4 wherein	See above.
said outer cover exhibits a Shore D hardness of about 64 or less.	<u>Nesbitt</u> : Nesbitt teaches an outer cover layer made of Surlyn 1855 (now Surlyn 9020) that has a Shore

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	<p>D hardness of 55, <u>see</u> Exhibit I.</p> <p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, <u>see</u> Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See also below for Shore D hardness of 64 or less limitation explanation.</p>
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As stated above, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

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This rejection of claim 5 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 29: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 29: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

Ground 29: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #30.

In the alternative, the requester submits on page 30 that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

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Below is a claim chart identifying the claim limitations and where Nesbitt and Nesbitt mentioning Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 5	Nesbitt/Nesbitt mentioning Molitor
The golf ball of claim 4 wherein said outer cover exhibits a Shore D hardness of about 64 or less.	<p>See above.</p> <p><u>Nesbitt</u>: Nesbitt teaches an outer cover layer made of Surlyn 1855 (now Surlyn 9020) that has a Shore D hardness of 55, <u>see</u> Exhibit I.</p> <p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, <u>see</u> Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See also below for Shore D hardness of 64 or less limitation explanation.</p>

As stated above, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with

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respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 5 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 30: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 30: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 30: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #31.

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The requester submits on page 47 of the request that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and which reference Nesbitt, Nesbitt mentioning Molitor '637 or Wu discloses, teaches or suggests the claim limitations.

Claim 5	Nesbitt/Nesbitt mentioning Molitor '637 or Wu
The golf ball of claim 4 wherein	See above
said outer cover exhibits a Shore D hardness of about 64 or less.	<p><u>Nesbitt</u>: Nesbitt teaches an outer cover layer made of Surlyn 1855 (now Surlyn 9020) that has a Shore D hardness of 55, <u>see</u> Exhibit I.</p> <p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, <u>see</u> Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p><u>Wu</u>: "Preferably, a golf ball is made in accordance with the present invention by molding a cover about a core wherein the cover is formed from a polyurethane composition comprising a polyurethane prepolymer and a slow-reacting polyamine curing agent or a difunctional glycol." (Wu, col. 3, ll. 62-66).</p>

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	<p><u>Wu</u>: "With polyurethanes made in accordance with the present invention, the degree of cure which has taken place is dependent upon, inter alia, the time, temperature, type of curative, and amount of catalyst used. It has been found that the degree of cure of the cover composition is directly proportional to the hardness of the composition. A hardness of about 10D to 30D, Shore D hardness for the cover stock at the end of the intermediate curing step (i.e. just prior to the final molding step) has been found to be suitable for the present invention. More preferred is a hardness of about 12D to 20D." (Wu, col. 6, ll. 27-38).</p> <p>See also below for Shore D hardness of 64 or less limitation explanation</p>
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Wu further teaches in col. 1:36-46 that SURLYN covered golf balls lack the "click" and "feel" of balata which golfers have become accustomed to such sensations and polyurethane covered golf balls can be made to have a similar "click" and "feel" of balata. Wu also at least teaches that polyurethanes made according to its invention will have Shore D hardness directly proportional to the degree of cure of the cover; and this Shore D hardness ranges from 10 to 30, preferably 12 to 20 on the Shore D scale, see col. 6:26-38. This teaching of Shore D hardness is directed to an intermediate curing step product prior to the final molding process to finish the golf ball. Exhibit C demonstrates the actual finished golf ball product having the cover layer that Wu teaches within its disclosure. Exhibit C teaches that the golf ball taught therein is covered by the following patents: 4,783,078; 4,846,910; 4,858,923; 4,904,320; 4,915,390; 5,007,594; 5,080,367; 5,133,509; **5,334,673**; and D339,074. The '673 Patent teaches the cover sock of the Exhibit C finished golf ball. Exhibit C teaches that the golf ball taught therein has a cover material made from an "elastomer", having a thickness of .050", and 58 Shore D hardness. All

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three properties are within the range of mechanical properties of the claim invention (polyurethane is an elastomer, cover layer thickness ranges from 0.010 to 0.070 inches and the Shore D hardness is less than 64). Because it has been admitted by the inventor of the Sullivan '893 patent that the particular chemical properties of the materials (the chemical composition) used in the construction of a golf ball lack criticality as compared to the mechanical properties (the Shore D hardness, flexural modulus, layer thickness) of those compounds used for constructing the different layers (Exhibit G at 334), one of ordinary skill in the art at the time the invention was made would find it obvious to incorporate the teachings of Wu which inherently include the teachings of Shore hardness for the fully cured cover layer as taught in Exhibit C as obvious equivalent materials in order to achieve the same end result of providing a cover layer that has the same "click" and "feel" of a balata cover which the extra durability of an elastomeric material.

This rejection of claim 5 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 31: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 31: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

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Ground 31: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #32.

The requester submits on page 47 of the request that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt or Nesbitt mentioning Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 5	Nesbitt/Nesbitt mentioning Molitor '637
The golf ball of claim 4 wherein said outer cover exhibits a Shore D hardness of about 64 or less.	See above. <u>Nesbitt</u> : Nesbitt teaches an outer cover layer made of Surlyn 1855 (now Surlyn 9020) that has a Shore D hardness of 55, <u>see</u> Exhibit I. <u>Nesbitt</u> : "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.) <u>Molitor '637</u> : In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane

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	<p>identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See also below for Shore D hardness of 64 or less limitation explanation.</p>
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As stated above, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 5 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 32: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

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Ground 32: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 32: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #33:

The requester submits on page 48 that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 5	Proudfit
The golf ball of claim 4 wherein said outer cover exhibits a Shore D hardness of about 64 or less.	See above. "...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.

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Proudfit discloses, teaches and suggests a three-piece golf ball (core, inner layer and outer layer) with the layers within the range of claimed thicknesses each layer made from a material having the mechanical properties substantially similar to the claimed mechanical properties. What Proudfit lacks in clearly disclosing are the particular mechanical and chemical properties of the claimed invention. However, Proudfit either incorporates by reference these mechanical and chemical properties and/or the materials used within the Proudfit golf ball inherently have these mechanical and chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of this invention. (Proudfit, col. 1, ll.39-43). The '981 patent discloses the preferably amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Pat, col. 3, ll. 59-60). If Proudfit discloses using blends SURLYN the chemical for making the inner cover and the '981 Patent is the formulation for ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and SURLYN 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid. As taught from Exhibit I, SURLYN 8940 has a Shore D hardness of 65; SURLYN 9910 has a Shore D hardness of 64, see Exhibit I. Therefore, this cover blend inherently has a hardness of 60 or more. Proudfit discloses the outer layer being a blend of balata. An example of the blend is disclosed in Table 7 reproduced below.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	50.00
Polybutadiene	49.00
Zinc Oxide	5.00
Titanium Dioxide	17.00
Ultramarine Blue color	.50
Zinc DiAcrylate	35.00
Peroxide (Varex 250 XL)	2.50
Total	160.00

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Note that Trans PolyIsoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore hardness of less than 64.

This rejection of claim 5 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 33: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 33: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 33: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #34.

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The requester submits on page 48 that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 5	Proudfit
The golf ball of claim 4 wherein	See above.
said outer cover exhibits a Shore D hardness of about 64 or less.	"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.

Proudfit discloses, teaches and suggests a three-piece golf ball (core, inner layer and outer layer) with the layers within the range of claimed thicknesses each layer made from a material having the mechanical properties substantially similar to the claimed mechanical properties. What Proudfit lacks in clearly disclosing are the particular mechanical and chemical properties of the claimed invention. However, Proudfit either incorporates by reference these mechanical and chemical properties and/or the materials used within the Proudfit golf ball inherently have these mechanical and chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of this invention. (Proudfit, col. 1, ll.39-43). The '981 patent discloses the preferably amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Pat, col. 3, ll. 59-60). If Proudfit discloses using

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blends SURLYN the chemical for making the inner cover and the '981 Patent is the formulation for ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and SURLYN 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid. As taught from Exhibit I, SURLYN 8940 has a Shore D hardness of 65; SURLYN 9910 has a Shore D hardness of 64, see Exhibit I. Therefore, this cover blend inherently has a hardness of 60 or more. Proudfit discloses the outer layer being a blend of balata. An example of the blend is disclosed in Table 7 reproduced below.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	5.00
Titanium Dioxide	17.00
Ultramarine Blue color	.50
Zinc DiAcrylate	35.00
Peroxide (Varox 230 XL)	2.50
Total	160.00

Note that Trans PolyIsoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore hardness of less than 64.

This rejection of claim 5 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 34: Patent Owner's Argument

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Patent Owner does not specifically argue this rejection.

Ground 34: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 34: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #35.

The requester submits on page 48 that claim 5 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 5	Proudfit
The golf ball of claim 4 wherein said outer cover exhibits a Shore D hardness of about 64 or less.	See above. "...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a

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	Shore D hardness of less than 64, see the reasoning below.
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Proudfit discloses, teaches and suggests a three-piece golf ball (core, inner layer and outer layer) with the layers within the range of claimed thicknesses each layer made from a material having the mechanical properties substantially similar to the claimed mechanical properties. What Proudfit lacks in clearly disclosing are the particular mechanical and chemical properties of the claimed invention. However, Proudfit either incorporates by reference these mechanical and chemical properties and/or the materials used within the Proudfit golf ball inherently have these mechanical and chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of this invention. (Proudfit, col. 1, ll.39-43). The '981 patent discloses the preferably amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Pat, col. 3, ll. 59-60). If Proudfit discloses using blends SURLYN the chemical for making the inner cover and the '981 Patent is the formulation for ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and SURLYN 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid. As taught from Exhibit I, SURLYN 8940 has a Shore D hardness of 65; SURLYN 9910 has a Shore D hardness of 64, see Exhibit I. Therefore, this cover blend inherently has a hardness of 60 or more. Proudfit discloses the outer layer being a blend of balata. An example of the blend is disclosed in Table 7 reproduced below.

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TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	5.00
Titanium Dioxide	17.00
Ultramarine Blue color	.30
Zinc DiAcrylate	35.00
Peroxide (Varox 230 XL)	2.50
Total	160.00

Note that Trans PolyIsoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore hardness of less than 64.

In addition to Proudfit showing, Molitor '751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a **cover having a shore C hardness less than 85**, preferably 70-80, and most preferably 72-76. The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a **thermoplastic urethane having a shore A hardness less than 95** and (2) an ionomer having a shore D hardness greater than 55. The ionomer comprises olefinic groups having two to four carbon atoms copolymerized with acrylic or methacrylic acid groups and cross-linked with metal ions, preferably sodium or zinc ions. **The primary components of the blended cover are set at a weight ratio so as to result in a cover material after molding having a shore C hardness within the range of 70 to 85, preferably 72 to 76.** Preferably, the urethane component of the cover material has a tensile strength greater than 2500 psi and an elongation at break greater than 250%. A preferred cover material comprises about 8 parts of the thermoplastic urethane and between 1 and 4 parts ionomer. Preferably, the cover is no greater than 0.060 inch thick. Thinner covers appear to maximize the short iron playability characteristics of the balls.

(Molitor '751, col. 33-57 (emphasis added)). Thus, Molitor '751 teaches having a outer cover layer with a Shore C hardness less than 85 and preferably between 72 and 76. Moreover,

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Molitor '751 teaches what golf balls are included in the definition of "two-piece" ball within its instant specification.

The phrase "two-piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, **but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls having non-wound cores.**

Molitor '751, col. 3, ll. 7-12 (emphasis added)). Proudfit, likewise, teaches the two-piece golf balls can fit within this definition.

FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.

(Proudfit, col. 7, ll. 21-24).

As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art "translates" a Shore C value to a Shore D value is by taking the known Shore hardness values with a given range, in this instance Shore C, for given materials, in this instance a polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore

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gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

This rejection of claim 5 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 35: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 35: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 35: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 5 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

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Re. Claim 6

Proposed Third Party Requester Rejection: Ground #36.

The requester submits on pages 48-49 that claim 6 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Claim 6 is rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt (incorporating by reference Molitor '637).

Below is a claim chart identifying the claim limitations and where Nesbitt (incorporating by reference Molitor '637) discloses the claim limitations.

Claim 6	Nesbitt (incorporating by reference Molitor '637)
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

This rejection of claim 6 based on Nesbitt (incorporating by reference Molitor '637) was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 36: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 36: Third Party Requester's Comments

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Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

Ground 36: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #37.

In the alternative, the requester submits on page 49 that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 6	Nesbitt
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

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This rejection of claim 6 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 37: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 37: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 37: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 6 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #38.

The requester submits on page 49 of the request that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

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Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 6	Nesbitt
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

This rejection of claim 6 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 38: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 38: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 38: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 6 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

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Proposed Third Party Requester Rejection: Ground #39.

The requester submits on page 49 of the request that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 6	Nesbitt
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

This rejection of claim 6 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 39: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 39: Third Party Requester's Comments

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Third Party Requester does not specifically counter argue this rejection.

Ground 39: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 6 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejections: Ground #40-42.

The requester submits on page 49 that claim 6 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637); Wu, U.S. Pat. No. 5,334,673 (Wu); or Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

These rejections are not adopted for the reasons given in below.

Claim 6 requires the outer layer thickness to be in the range of about 0.01 to about 0.05 inches. Proudfit's preferred outer layer thickness embodiment is 0.0525 inches thick. See Proudfit, col. 7, ll. 40-46. Therefore, Proudfit's preferred embodiment is outside the claimed range. Further, the difference between Proudfit's preferred embodiment and the claimed invention's upper range limit is 0.0025 inches or twenty-five thousandths of an inch. This difference equates to approximately a factor of 4. The requester admits that it is not the chemical but mechanical properties of the materials used in making golf balls which is important to those skilled in the art. One of the mechanical properties in constructing a golf ball with materials it

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the thickness to make a given layer. For these reasons, one skilled in the art would not find obvious the claimed invention of claim when viewing Proudfit with Molitor '637, Wu or Molitor '751. Note that Molitor '637, Wu or Molitor '751 lack curing the deficiencies of Proudfit with respect to the instant claimed invention.

Re. Claim 7

Proposed Third Party Requester Rejection: Ground #43.

The requester submits on page 50 that claim 7 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Claim 7 is rejected under 35 U.S.C. § 102(b) as being unpatentable over Nesbitt (incorporating by reference Molitor '637).

Below is a claim chart identifying the claim limitations and where Nesbitt (incorporating by reference Molitor '637) discloses the claim limitations.

Claim 7	Nesbitt (incorporating by reference Molitor '637)
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)

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This rejection of claim 7 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 43: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 43: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

Ground 43: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #44.

In the alternative, the requester submits on page 50 that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

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Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 7	Nesbitt
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)

This rejection of claim 7 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 44: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 44: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 44: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor

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'637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #45.

The requester submits on page 50 of the request that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 7	Nesbitt
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surllyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)

This rejection of claim 7 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 45: Patent Owner's Argument

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Patent Owner does not specifically argue this rejection.

Ground 45: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 45: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #46.

The requester submits on page 50 of the request that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 7	Nesbitt
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.03 to	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in

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about 0.06 inches.	the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)
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This rejection of claim 4 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 46: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 46: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 46: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #47.

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The requester submits on pages 51-52 that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 7	Proudfit
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch ..." (Proudfit, col. 7, ll. 40-46.)

This rejection of claim 4 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 47: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 47: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 47: Examiner's Response to the Argument and Comments

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Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #48.

The requester submits on pages 51-52 that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 7	Proudfit
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch ..." (Proudfit, col. 7, ll. 40-46.)

This rejection of claim 7 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 48: Patent Owner's Argument

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Patent Owner does not specifically argue this rejection.

Ground 48: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 48: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #49.

The requester submits on pages 51-52 that claim 7 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 7	Proudfit
The golf ball of claim 4 wherein said outer cover layer has a thickness of from about 0.03 to	See above. "The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of

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about 0.06 inches.	1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch ..." (Proudfit, col. 7, ll. 40-46.)
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This rejection of claim 7 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 49: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 49: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 49: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 7 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

Re. Claim 8

Proposed Third Party Requester Rejection: Ground #50.

The requester submits on pages 53-55 that claim 8 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

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This rejection is adopted in this office action.

Claim 8 is rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt (incorporating by reference Molitor '637).

Below is a claim chart identifying the claim limitations Nesbitt (incorporating by reference Molitor '637) discloses.

Claim 8	Nesbitt (incorporating by reference Molitor '637)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core:	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed on said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).
said inner cover layer having a Shore D hardness of about 60 or more,	<p><u>Nesbitt</u>: "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p><u>Per the '156 Patent</u>: "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 46-48.)</p> <p><u>Exhibit I</u>: DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.</p>
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p> <p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN</p>

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	1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).
having a modulus of from about 15,000 to about 70,000 psi; and	See below.
an outer cover layer disposed about said inner cover layer,	"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)
said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
comprising a polyurethane material.	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

As mentioned above, Nesbitt incorporating by reference Molitor '637 describe a number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-

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15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

Also, as mentioned above, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64. Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Moreover, Molitor '637 teaches a list of materials that may adapted for use in the invention:

Homopolymeric and copolymeric substances, such as (1) vinyl resins formed by the polymerization of vinyl chloride or by the copolymerization of vinyl chloride with unsaturated polymerizable compounds, e.g., vinyl esters; (2) polyolefins such as polyethylene, polypropylene, polybutylene, transpolyisoprene, and the like, including

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copolymers of polyolefins; (3) polyurethanes such as are prepared from polyols and organic polyisocyanates; (4) polyamides such as polyhexamethylene; (5) polystyrene, high impact polystyrene, styrene acrylonitrile copolymer and ABS, which is acrylonitrile, butadiene styrene copolymer; (6) acrylic resins as exemplified by the copolymers of methylmethacrylate, acrylonitrile, and styrene, etc.; (7) thermoplastic rubbers such as the urethanes, copolymers of ethylene and propylene, and transpolyisoprene, block copolymers of styrene and cispolybutadiene, etc.; and (8) polyphenylene oxide resins, or a blend with high impact polystyrene known by the trade name "Noryl."

See Molitor '637, col. 5, ll. 33-50.

In addition, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334.

This rejection of claim 8 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 50: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 50: Third Party Requester's Comments

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Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

Ground 50: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #51.

In the alternative, the requester submits on pages 53-55 that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 8	Nesbitt (primary) with Molitor '637 (teaching)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core:	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed on said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-

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	37).
said inner cover layer having a Shore D hardness of about 60 or more,	<p><u>Nesbitt</u>: "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p><u>Per the '156 Patent</u>: "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 46-48.)</p> <p><u>Exhibit I</u>: DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.</p>
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p> <p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
having a modulus of from about 15,000 to about 70,000 psi; and	See below.
an outer cover layer disposed about said inner cover layer,	"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)
said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
comprising a polyurethane material.	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p>

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	<p><u>Exhibit J:</u> ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>
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As mentioned above, Nesbitt references Molitor '637 as describing an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

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Also, as mentioned above, Molitor '637 teaches in TABLE 10 an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133. A review of the scientific literature yields that ESTANE 58133 has an inherent Shore D hardness of 55, see Exhibit J "ESTANE 58133 TPU Product Data Sheet". A Shore D hardness of 55 is within the range claimed of Shore D hardness less than 64. Therefore, Molitor '637's teaching of using ESTANE 58133 inherently meets the claim limitation of providing a outer cover layer of polyurethane material having a Shore hardness of less than 64. Moreover, Molitor '637 teaches a list of materials that may adapted for use in the invention:

Homopolymeric and copolymeric substances, such as (1) vinyl resins formed by the polymerization of vinyl chloride or by the copolymerization of vinyl chloride with unsaturated polymerizable compounds, e.g., vinyl esters; (2) polyolefins such as polyethylene, polypropylene, polybutylene, transpolyisoprene, and the like, including copolymers of polyolefins; (3) polyurethanes such as are prepared from polyols and organic polyisocyanates; (4) polyamides such as polyhexamethylene; (5) polystyrene, high impact polystyrene, styrene acrylonitrile copolymer and ABS, which is acrylonitrile, butadiene styrene copolymer; (6) acrylic resins as exemplified by the copolymers of methylmethacrylate, acrylonitrile, and styrene, etc.; (7) thermoplastic rubbers such as the urethanes, copolymers of ethylene and propylene, and transpolyisoprene, block copolymers of styrene and cispolybutadiene, etc.; and (8) polyphenylene oxide resins, or a blend with high impact polystyrene known by the trade name "Noryl."

See Molitor '637, col. 5, ll. 33-50.

In addition, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the

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mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334.

Thus, because it appears that to one of ordinary skill in the art at the time the invention was created that the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 8 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 51: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 51: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 51: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 8 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor

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'637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #52.

The requester submits on pages 55-57 of the request that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and which reference Nesbitt or Wu discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 8	Nesbitt mentioning Molitor '637 with Wu (teaching)
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core:	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed on said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).
said inner cover layer having a	Nesbitt: "[I]nner cover 14 of molded hard, high flexural

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Shore D hardness of about 60 or more,	<p>modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines 36-38.)</p> <p><u>Per the '156 Patent</u>: "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 46-48.)</p> <p><u>Exhibit I</u>: DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.</p>
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p> <p><u>Molitor '637</u>: Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
having a modulus of from about 15,000 to about 70,000 psi; and	See below.
an outer cover layer disposed about said inner cover layer,	"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)
said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and	"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)
comprising a polyurethane material.	<p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J</u>: ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a</p>

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	<p>non-ionomeric thermoplastic elastomer.</p> <p>Wu: "[t]he present invention is a golf ball product made from a polyurethane prepolymer cured with a slow-reacting curing agent selected from the group of slow-reacting polyamine curing agents or difunctional glycols. The term "golf ball product" as used in the specification and claims means a cover, a core, a center or a one-piece golf ball. The cover of a golf ball made in accordance with the present invention has been found to have good shear resistance, cut resistance, durability and resiliency. Preferably, the polyurethane composition of the present invention is used to make the cover of a golf ball." (Wu, col. 2, ll. 33-44).</p>
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As mentioned above, Nesbitt references Molitor '637 as describing an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing

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Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

As mentioned above, Nesbitt mentioning Molitor '637 teaches the use of particular polyurethane materials for the use as an outer layer. Wu teaches that polyurethane was being used as the outer layer of golf ball *circa* 1993. Wu further teaches in col. 1:36-46 that SURLYN covered golf balls lack the "click" and "feel" of balata which golfers have become accustomed to such sensations and polyurethane covered golf balls can be made to have a similar "click" and "feel" of balata. Wu also at least teaches that polyurethanes made according to its invention will have Shore D hardness directly proportional to the degree of cure of the cover; and this Shore D hardness ranges from 10 to 30, preferably 12 to 20 on the Shore D scale, see col. 6:26-38. This teaching of Shore D hardness is directed to an intermediate curing step product prior to the final molding process to finish the golf ball. Exhibit C demonstrates the actual finished golf ball product having the cover layer that Wu teaches within its disclosure. Exhibit C teaches that the golf ball taught therein is covered by the following patents: 4,783,078; 4,846,910; 4,858,923; 4,904,320; 4,915,390; 5,007,594; 5,080,367; 5,133,509; 5,334,673; and D339,074. The '673 Patent teaches the cover sock of the Exhibit C finished golf ball. Exhibit C teaches that the golf ball taught therein has a cover material made from an "elastomer", having a thickness of .050", and 58 Shore D hardness. All three properties are within the range of mechanical properties of the claim invention (polyurethane is an elastomer, cover layer thickness ranges from 0.010 to 0.070 inches and the Shore D hardness is less than 64). Because it has been admitted by the

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inventor of the Sullivan '893 patent that the particular chemical properties of the materials (the chemical composition) used in the construction of a golf ball lack criticality as compared to the mechanical properties (the Shore D hardness, flexural modulus, layer thickness) of those compounds used for constructing the different layers (Exhibit G at 334), one of ordinary skill in the art at the time the invention was made would find it obvious to incorporate the teachings of Wu which inherently include the teachings of Shore hardness for the fully cured cover layer as taught in Exhibit C as obvious equivalent materials in order to achieve the same end result of providing a cover layer that has the same "click" and "feel" of a balata cover which the extra durability of an elastomeric material.

This rejection of claim 8 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 52: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 52: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 52: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 8 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is

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maintained. See "Ground 3: Examiner's Response to the Argument and Comments,"
supra.

Proposed Third Party Requester Rejection: Ground #53.

The requester submits on pages 57-59 of the request that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations. As reported in the Order granting reexamination, it needs to be correctly stated on the record that Nesbitt and Molitor '637 which is mentioned in Nesbitt teach the use of particular polyurethane materials for the use as an outer layer.

Claim 8	Nesbitt mentioning Molitor '637
A golf ball comprising:	"The disclosure embraces a golf ball and method of making the same..." (Nesbitt, Abstract; and FIGS. 1 & 2)
a core:	"Referring to the drawings in detail there is illustrated a golf ball 10 which comprises a solid center or core formed as a solid body of resilient polymeric material or rubber-like material in the shape of a sphere. (Nesbitt, col. 2, ll. 31-34).
an inner cover layer disposed on said core,	"Disposed on the spherical center or core 12 is a first layer, lamination, ply or inner cover 14 of molded hard, highly flexural modulus resinous material...." (Nesbitt, col. 2, ll. 34-37).
said inner cover layer having a Shore D hardness of about 60 or more,	Nesbitt: "[I]nner cover 14 of molded hard, high flexural modulus resinous material such as type 1605 Surlyn® marketed by E.I DuPont de Nemours." (Nesbitt, col. 2, lines

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	<p>36-38.)</p> <p><u>Per the '156 Patent:</u> "Type 1605 Surlyn® (now designated Surlyn® 8940)." ('156 patent, col. 2, lines 54-60.)</p> <p><u>Exhibit I:</u> DuPont Surlyn® Product Information: Surlyn® 8940 has a Shore D hardness of 65.</p>
<p>said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and</p>	<p>"Reference is made to the application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers 14 ... for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60).</p> <p><u>Molitor '637:</u> Molitor teaches, in examples 1-7, cover materials including a blend of two ionomer resins: SURLYN 1605 and SURLYN 1557. (Molitor '637, col. 14, l. 22 to col. 16, l. 34).</p>
<p>having a modulus of from about 15,000 to about 70,000 psi; and</p>	
<p>an outer cover layer disposed about said inner cover layer,</p>	<p>"An outer layer, ply, lamination or cover 16 ... is then remolded onto the inner play or layer 14 ..." (Nesbitt, col. 2, ll. 43-47.)</p>
<p>said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and</p>	<p>"It is found that the inner layer of hard, high flexural modulus resinous material such as Surlyn® resin type 1605, is preferably of a thickness in a range of 0.020 inches and 0.070 inches." (Nesbitt, col. 3, lines 19-23.)</p>
<p>comprising a polyurethane material.</p>	<p><u>Nesbitt:</u> "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637:</u> In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p><u>Exhibit J:</u> ESTANE 58133 is a Polyester-Type Thermoplastic Polyurethane (TPU Compound) which is a non-ionomeric thermoplastic elastomer.</p>

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As shown above in the claim chart, Nesbitt mentioning Molitor '637 suggests the use of a soft outer cover layer including a polyurethane material. In an analogous golf ball, Molitor '751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76. The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a thermoplastic urethane having a shore A hardness less than 95 and (2) an ionomer having a shore D hardness greater than 55.

(Molitor '751, col. 2, ll.33-49 (emphasis added)).

Moreover, in explaining what constitutes a two-piece golf ball, Molitor '751 teaches that:

The phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls have non-wound cores.

(Molitor '751, col. 3, ll. 7-12 (emphasis added)).

As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art "translates" a Shore C value to a Shore D value is by taking the known Shore hardness values

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with a given range, in this instance Shore C, for given materials, in this instance polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

As stated in the request spanning page 58 and page 59

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft outer cover layer of Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by Molitor '751 to provide a golf ball that includes "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, ll. 61-68)

As mentioned above, Nesbitt references Molitor '637 as describing an number of compositions suitable for the inner cover layer 14. Of particular interest in this case are Examples 1-7 within Molitor '637. Examples 1-7 use a ratio of SURLYN 1605 and SURLYN 1557. The use of SURLYN grades for golf ball covers is also disclosed in U.S. Pat. No. 4,690,981. The preferred composition in the '981 Patent has "from about 5[%] to about 15% by weight of unsaturated carboxylic acid." '981 Pat., col. 3, ll. 59-60. Those of ordinary skill in the art understand that SURLYN 1605 has been "redesignated" as SURLYN 8940 and SURLYN 1557 has been "redesignated" as SURLYN 9650, see e.g. U.S. Pat. No. 4,679,795, col. 6, ll. 10-

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15 and U.S. Pat. No. 5,150,906, col. 4, ll. 66. Furthermore, the Patent Owner in the Sullivan '873 Patent admitted that SURLYN 1605 is now designated as 8940 and was used in Nesbitt's first (inner) layer and is a sodium ion based low acid "(less than or equal to 15 weight percent methacrylic acid) ionomer resin having a flexural modulus of about 51,000 psi." See '873 Patent, col. 2, ll. 43-50. Moreover, as shown in the "Properties Grid for Selected Industrial Grades of SURLYN" SURLYN 9650's ordinate compared to the other grades of SURLYN is toward the "Low % Acid" side of the graph. Thus, based on this evidence, Nesbitt referencing Molitor '637 inherently teaches using as an inner layer at least one ionomer resin having no more than 16% by weight of alpha, beta-unsaturated carboxylic acid. Moreover, as stated above, it has been identified that one resin in Nesbitt has a flexural modulus of 51,000 psi. This teaching of flexural modulus falls within the range claimed (15,000 psi to 70,000 psi).

As stated in the request spanning pages 41-42

It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the soft non-ionomeric polymeric outer cover layer incorporated by Nesbitt and replace it with an outer cover layer made of the soft polyurethane material taught by Molitor '751 to provide a golf ball that includes "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, ll. 61-68)

Moreover, because it appears that to one of ordinary skill in the art at the time the invention was created that the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to

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substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 8 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 53: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 53: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 53: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 8 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #54.

The requester submits on pages 59-62 that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

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Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 8	Proudfit								
A golf ball comprising:	"This invention relates to golf balls , and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)								
a core:	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>								
an inner cover layer disposed on said core,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)								
said inner cover layer having a Shore D hardness of about 60 or more,	See below with respect to Shore D hardness.								
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"The composition of the inner cover layer is described in Table 6."</p> <table border="1"> <caption>TABLE 6</caption> <thead> <tr> <th colspan="2">Composition of Inner Layer of Cover (Parts by Weight)</th> </tr> <tr> <th>Ionomer Type</th> <th>Blend Ratio</th> </tr> </thead> <tbody> <tr> <td>Kodum-Surlyn 6940</td> <td>75%</td> </tr> <tr> <td>Zinc-Surlyn 9910</td> <td>25%</td> </tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p>	Composition of Inner Layer of Cover (Parts by Weight)		Ionomer Type	Blend Ratio	Kodum-Surlyn 6940	75%	Zinc-Surlyn 9910	25%
Composition of Inner Layer of Cover (Parts by Weight)									
Ionomer Type	Blend Ratio								
Kodum-Surlyn 6940	75%								
Zinc-Surlyn 9910	25%								

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	<p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>						
having a modulus of from about 15,000 to about 70,000 psi; and	<p>"The standard resins have a flexural modulus in the range of about 30,000 to about 55,000 psi as measured by ATM Method D-790. (Standard resins are referred to as "hard Surlyns" in U.S. Patent No. 4,884,814.)" (col. 5, line 66-col. 6, line 1.)</p> <p>"Specific standard Surlyn resins which can be used in the inner layer include 8940 (sodium), 9910 (zinc)" (col. 6, lines 6-7.)</p> <p>The composition of the inner cover layer is described in Table 6.</p> <div style="text-align: center;"> <p>TABLE 6</p> <p>Composition of Inner Layer of Cover (Parts by Weight)</p> <table> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Sodium Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc Surlyn 9910</td><td>25%</td></tr> </table> </div> <p>(Proudfit, col. 8, ll. 22-30.)</p>	Ionomer Type	Blend Ratio	Sodium Surlyn 8940	75%	Zinc Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium Surlyn 8940	75%						
Zinc Surlyn 9910	25%						
an outer cover layer disposed about said inner cover layer,	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p>						

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said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and	"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch...." (Proudfit, col. 7, ll. 40-46)
comprising a polyurethane material.	"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17)

As pointed out in the request on pages 61 and 62:

While Proudfit may not expressly disclose the use of polyurethane as an outer cover material, it would have been obvious given that "[t]he patent literature is replete with proposed cover formulations seeking to improve upon the balata and ionomer covers [including] [p]olyurethane" (See Molitor '751, col. 2, lines 9-12.) Soft polyurethane materials had been known to be a substitute for balata covers for decades prior to the filing of the '130 patent.

For example, Molitor '637 discloses the use of polyurethane material as a soft polymeric material that may be used as an outer cover layer of a golf ball. (See Molitor '637, col. 5, lines 33-41; col. 18, Examples 16 and 17.) One exemplary polyurethane material used by Molitor as an outer cover material includes Estane 58133.

As was readily appreciated by those skilled in the art—including the inventor of the '130 patent—the types of materials used in a golf ball are not as critical to a golf ball's playability as are the mechanical properties of those materials. (See Exhibit G at 334.) The Estane 58133 is a relatively soft material and has a Shore D hardness of 55 and is also a low flexural modulus material having a modulus of about 25,000 psi. (See Exhibit J.) Proudfit's outer cover layer is also relatively soft and has a flexural modulus between 20,000 and 25,000 psi. (Proudfit, col. 6, lines 28-31.) Due to the similarities between these two materials, the ordinarily skilled artisan would have recognized the substitutability of these two materials as well as the benefits of using polyurethane as an outer cover material.

On page 62, the request concludes:

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the balata-based outer cover layer of Proudfit to include the Estane polyurethane outer cover layer material of Molitor '637 because such was a well known substitute to balata and gives a number of advantages over balata as would have been readily appreciated by those skilled in the art. These advantages include: (1) improved processability; (2) improved durability when compared to balata; (3) cost-effectiveness when compared to balata; and (4) having a good "click" and "feel." All of this would have led one of ordinary skill in the art to replace the soft balata outer cover layer of

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Proudfit with the soft polyurethane outer cover layer of Molitor '637 at the time of the alleged invention.

This rejection of claim 8 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 54: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 54: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 54: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 8 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #55.

The requester submits on pages 62-64 that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

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Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 8	Proudfit						
A golf ball comprising:	"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)						
a core:	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>						
an inner cover layer disposed on said core,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)						
said inner cover layer having a Shore D hardness of about 60 or more,	See below with respect to Shore D hardness.						
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and	<p>"The composition of the inner cover layer is described in Table 6."</p> <p style="text-align: center;">TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</p> <table border="1"> <thead> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium-Burlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Burlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p>	Ionomer Type	Blend Ratio	Sodium-Burlyn 8940	75%	Zinc-Burlyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium-Burlyn 8940	75%						
Zinc-Burlyn 9910	25%						

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	<p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>						
having a modulus of from about 15,000 to about 70,000 psi; and	<p>"The standard resins have a flexural modulus in the range of about 30,000 to about 55,000 psi as measured by ATM Method D-790. (Standard resins are referred to as "hard Surlyns" in U.S. Patent No. 4,884,814.)" (col. 5, line 66-col. 6, line 1.)</p> <p>"Specific standard Surlyn resins which can be used in the inner layer include 8940 (sodium), 9910 (zinc)" (col. 6, lines 6-7.)</p> <p>The composition of the inner cover layer is described in Table 6.</p> <div> <p style="text-align: center;">TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</p> <table> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Sodium-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </table> </div> <p>(Proudfit, col. 8, ll. 22-30.)</p>	Ionomer Type	Blend Ratio	Sodium-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
Ionomer Type	Blend Ratio						
Sodium-Surlyn 8940	75%						
Zinc-Surlyn 9910	25%						
an outer cover layer disposed about said inner cover layer,	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p>						

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said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and	"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch...." (Proudfit, col. 7, ll. 40-46)
comprising a polyurethane material.	"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17)

As pointed out in the request on pages 62 and 63:

... Proudfit teaches a golf ball having a two-piece cover including a hard, ionomeric inner cover layer and a soft balata outer cover layer. While Proudfit may not disclose the use of a polyurethane material as the outer cover layer of a golf ball, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the soft balata outer cover layer of Proudfit to include the soft polyurethane material taught by Wu. Wu teaches that: "The problem with SURLYN®-covered golf balls, however, is that they lack the "click" and "feel" which golfers had become accustomed to with balata. "Click" is the sound when the ball is hit by a golf club and "feel" is the overall sensation imparted to the golfer when the ball is hit. It has been proposed to employ polyurethane as a cover stock for golf balls because, like SURLYN®, it has a relatively low price compared to balata and provides superior cut resistance over balata. However, unlike SURLYN®-covered golf balls, polyurethane-covered golf balls can be made to have the "click" and "feel" of balata. (Wu at col. 1, lines 36-46.) As the inventor of the '130 patent had indicated in a 1994 publication, golf ball designers understood that the mechanical properties of the layers impacted the performance of the golf ball more than the materials themselves. (Exhibit G at 334.) Additionally, Wu's polyurethane material inherently has a flexural modulus of about 23,000 psi as measured in accordance with ASTM standards. (Decl. of Jeff Dalton at ¶ 7.) Proudfit's outer cover layer material has a flexural modulus of between about 20,000 and 25,000 psi. (Proudfit, col. 6, lines 28-31.) Thus, one of ordinary skill in the art would have appreciated that using Wu's polyurethane as Proudfit's outer cover layer would have provided similar playability characteristics as well as numerous advantages including, for example, durability.

Based on Wu's teachings, one of ordinary skill in the art would have recognized the substitutability of soft polyurethane for soft balata-based materials and the advantages of making such a substitution. These advantages include (1) low price compared to balata; (2) better cut resistance when compared to balata; and (3) a "click" and "feel" that is similar to balata. Moreover, the replacing the balata-material taught by Proudfit would have been obvious to those skilled in the art prior to November 9, 1995 because before that time, the Titleist Professional™ golf ball, which had used Wu's polyurethane material, had replaced balata-covered balls as the market leader. (See Exhibit C; see also Decl. of Jeffery L. Dalton at ¶¶ 3-4.)

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On page 64 the request concludes with:

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the alleged invention to modify Proudfit's golf ball by replacing the soft balata outer cover layer with an outer cover layer made of soft polyurethane material because polyurethane provides numerous advantages over balata while exhibiting the "click" and "feel" of balata.

This rejection of claim 8 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 55: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 55: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 55: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 8 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #56.

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The requester submits on pages 64-65 that claim 8 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 8	Proudfit
A golf ball comprising:	"This invention relates to golf balls, and more particularly, to a golf ball having a two-layer cover." (Proudfit, col. 1, ll. 11-12)
a core:	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p> <p>"Two specific solid core compositions used with the new two-layer cover had the composition describe in Table 1. One core was used in a golf ball which was designated as a 90 compression ball, and the other core was used in a golf ball which was designated as a 100 compression ball." (Proudfit, col. 7, ll. 51-55)</p>
an inner cover layer disposed on said core,	"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)
said inner cover layer having a Shore D hardness of about 60 or more,	See below with respect to Shore D hardness.
said inner cover layer comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated	"The composition of the inner cover layer is described in Table 6."

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<p>carboxylic acid and</p>	<p style="text-align: center;">TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</p> <table border="1"> <thead> <tr> <th>Isomer Type</th><th>Blend Ratio</th></tr> </thead> <tbody> <tr> <td>Sodium-Surlyn 8940</td><td>75%</td></tr> <tr> <td>Zinc-Surlyn 9910</td><td>25%</td></tr> </tbody> </table> <p>(Proudfit, col. 8, ll. 22-30)</p> <p>SURLYN 8940 and 9910 are both low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p> <p>Proudfit either incorporates by reference these chemical properties or the materials used within the Proudfit golf ball inherently have these chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of its invention. (Proudfit, col. 1, ll. 39-43.) The '981 Patent discloses the preferable amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Patent, col. 3, ll. 59-60.) If Proudfit discloses using blends of SURLYN as the chemical for making the inner cover and the '981 Patent is the formulation for the ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.</p>	Isomer Type	Blend Ratio	Sodium-Surlyn 8940	75%	Zinc-Surlyn 9910	25%
Isomer Type	Blend Ratio						
Sodium-Surlyn 8940	75%						
Zinc-Surlyn 9910	25%						
<p>having a modulus of from about 15,000 to about 70,000 psi; and</p>	<p>"The standard resins have a flexural modulus in the range of about 30,000 to about 55,000 psi as measured by ATM Method D-790. (Standard resins are referred to as "hard Surlyns" in U.S. Patent No. 4,884,814.)" (col. 5, line 66-col. 6, line 1.)</p> <p>"Specific standard Surlyn resins which can be used in the inner layer include 8940 (sodium), 9910 (zinc)" (col. 6, lines 6-7.)</p> <p>The composition of the inner cover layer is described in Table 6.</p>						

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	<p style="text-align: center;">TABLE 6 Composition of Inner Layer of Cover (Parts by Weight)</p> <table> <tr> <th>Ionomer Type</th><th>Blend Ratio</th></tr> <tr> <td>Sodium-Burlin 8940</td><td>73%</td></tr> <tr> <td>Zinc-Burlin 9910</td><td>25%</td></tr> </table> <p>(Proudfit, col. 8, ll. 22-30.)</p>	Ionomer Type	Blend Ratio	Sodium-Burlin 8940	73%	Zinc-Burlin 9910	25%
Ionomer Type	Blend Ratio						
Sodium-Burlin 8940	73%						
Zinc-Burlin 9910	25%						
an outer cover layer disposed about said inner cover layer,	<p>"FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material." (Proudfit, col. 7, ll. 21-24)</p>						
said outer cover layer having a thickness of from about 0.01 to about 0.07 inches, and	<p>"The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch..." (Proudfit, col. 7, ll. 40-46)</p>						
comprising a polyurethane material.	<p>"...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17)</p>						

As pointed out in the request on pages 64 and 65:

...Proudfit teaches a golf ball having a two-piece cover including a hard, ionomeric inner cover layer and a soft balata outer cover layer. While Proudfit may not disclose the use of a polyurethane material as the outer cover layer for a golf ball, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Proudfit's golf ball by replacing the soft balata outer cover layer with the soft polyurethane outer cover layer taught by Molitor '751.

Molitor '751 teaches that: It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a cover having a shore C hardness less than 85, preferably 70-80, and most preferably 72-76. The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a thermoplastic urethane having a shore A hardness less than 95 and (2) an ionomer having a shore D hardness greater than 55. (Molitor '751, col. 2, lines 33-49.) In explaining what a "two-piece" golf ball is, the Molitor '751 patent explains that: The phrase "two piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, but also includes balls having a solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and Other balls having non-wound cores. (Molitor '751, col. 2, lines 7-12.)

Proudfit teaches a "two-piece" golf ball that fits within this definition. Molitor '751 explains that the advantages of using a cover layer including a soft polyurethane material

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on a two-piece golf ball, such as the golf ball of Proudfit, include "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, lines 61-68.)

Molitor expresses the hardness of the cover material as a Shore C hardness of less than 85, preferably 70 to 85 and most preferably 72 to 76. (Molitor '751, col. 4, lines 21-25.) Based on Callaway's own measurements, a Shore C hardness of 73 is equal to a Shore D hardness of 47. (See U.S. Patent No. 6,905,648, Table 19 (Exhibit L.) A cover material having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

On page 65 the request concludes:

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to replace the soft balata outer cover layer of Proudfit with the soft outer cover layer including a soft polyurethane material as taught by Molitor '751 to provide golf balls that have "playability properties as good or better than balata-covered wound balls but are significantly more durable," and "have better wood playability properties than conventional two-piece balls, and permit experienced golfers to apply spin so as to fade or draw a shot" while having improved puttability. (Molitor '751, col. 2, lines 61-68.)

This rejection of claim 8 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 56: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 56: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 56: Examiner's Response to the Argument and Comments

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Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 8 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

Re. Claim 9

Proposed Third Party Requester Rejection: Ground #57.

The requester submits on page 66 that claim 9 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Claim 9 is rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt (incorporating by reference Molitor '637).

Below is a claim chart identifying the claim limitations where Nesbitt incorporating by reference Molitor '637) disclose the claim limitations.

Claim 9	Nesbitt (incorporating by reference Molitor '637)
The golf ball of claim 8 wherein said outer cover exhibits a Shore D hardness of about 64 or less.	<p>See above.</p> <p><u>Nesbitt</u>: Nesbitt teaches an outer cover layer made of Surlyn 1855 (now Surlyn 9020) that has a Shore D hardness of 55, <u>see</u> Exhibit I.</p> <p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an</p>

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	<p>outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See also below for Shore D hardness of 64 or less limitation explanation.</p>
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As stated above, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334.

This rejection of claim 9 based on Nesbitt (incorporating by reference Molitor '637) was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 57: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 57: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

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Ground 57: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #58.

In the alternative, the requester submits on page 66 that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Nesbitt and Nesbitt mentioning Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 9	Nesbitt/Nesbitt mentioning Molitor
The golf ball of claim 8 wherein said outer cover exhibits a Shore D hardness of about 64 or less.	<p>See above.</p> <p><u>Nesbitt</u>: Nesbitt teaches an outer cover layer made of Surlyn 1855 (now Surlyn 9020) that has a Shore D hardness of 55, <u>see</u> Exhibit I.</p> <p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p>

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	<p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See also below for Shore D hardness of 64 or less limitation explanation.</p>
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As stated above, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 9 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 58: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 58: Third Party Requester's Comments

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Third Party Requester does not specifically counter argue this rejection.

Ground 58: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 9 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #59.

The requester submits on page 66 of the request that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and which reference Nesbitt, Nesbitt mentioning Molitor '637 or Wu discloses, teaches or suggests the claim limitations.

Claim 9	Nesbitt/Nesbitt mentioning Molitor '637 or Wu
The golf ball of claim 8 wherein	See above
said outer cover exhibits a Shore D hardness of about 64 or less.	<p><u>Nesbitt</u>: Nesbitt teaches an outer cover layer made of Surlyn 1855 (now Surlyn 9020) that has a Shore D hardness of 55, <u>see</u> Exhibit I.</p> <p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of</p>

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	<p>this invention.” (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor ‘637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, see Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p><u>Wu</u>: “Preferably, a golf ball is made in accordance with the present invention by molding a cover about a core wherein the cover is formed from a polyurethane composition comprising a polyurethane prepolymer and a slow-reacting polyamine curing agent or a difunctional glycol.” (Wu, col. 3, ll. 62-66).</p> <p><u>Wu</u>: “With polyurethanes made in accordance with the present invention, the degree of cure which has taken place is dependent upon, inter alia, the time, temperature, type of curative, and amount of catalyst used. It has been found that the degree of cure of the cover composition is directly proportional to the hardness of the composition. A hardness of about 10D to 30D, Shore D hardness for the cover stock at the end of the intermediate curing step (i.e. just prior to the final molding step) has been found to be suitable for the present invention. More preferred is a hardness of about 12D to 20D.” (Wu, col. 6, ll. 27-38).</p> <p>See also below for Shore D hardness of 64 or less limitation explanation</p>
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Wu further teaches in col. 1:36-46 that SURLYN covered golf balls lack the “click” and “feel” of balata which golfers have become accustomed to such sensations and polyurethane covered golf balls can be made to have a similar “click” and “feel” of balata. Wu also at least teaches that polyurethanes made according to its invention will have Shore D hardness directly

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proportional to the degree of cure of the cover; and this Shore D hardness ranges from 10 to 30, preferably 12 to 20 on the Shore D scale, see col. 6:26-38. This teaching of Shore D hardness is directed to an intermediate curing step product prior to the final molding process to finish the golf ball. Exhibit C demonstrates the actual finished golf ball product having the cover layer that Wu teaches within its disclosure. Exhibit C teaches that the golf ball taught therein is covered by the following patents: 4,783,078; 4,846,910; 4,858,923; 4,904,320; 4,915,390; 5,007,594; 5,080,367; 5,133,509; 5,334,673; and D339,074. The '673 Patent teaches the cover sock of the Exhibit C finished golf ball. Exhibit C teaches that the golf ball taught therein has a cover material made from an "elastomer", having a thickness of .050", and 58 Shore D hardness. All three properties are within the range of mechanical properties of the claim invention (polyurethane is an elastomer, cover layer thickness ranges from 0.010 to 0.070 inches and the Shore D hardness is less than 64). Because it has been admitted by the inventor of the Sullivan '893 patent that the particular chemical properties of the materials (the chemical composition) used in the construction of a golf ball lack criticality as compared to the mechanical properties (the Shore D hardness, flexural modulus, layer thickness) of those compounds used for constructing the different layers (Exhibit G at 334), one of ordinary skill in the art at the time the invention was made would find it obvious to incorporate the teachings of Wu which inherently include the teachings of Shore hardness for the fully cured cover layer as taught in Exhibit C as obvious equivalent materials in order to achieve the same end result of providing a cover layer that has the same "click" and "feel" of a balata cover which the extra durability of an elastomeric material.

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This rejection of claim 9 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 59: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 59: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 59: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 9 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #60.

The requester submits on page 66 of the request that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

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Below is a claim chart identifying the claim limitations and where Nesbitt or Nesbitt mentioning Molitor '637 discloses, teaches or suggests the claim limitations.

Claim 9	Nesbitt/Nesbitt mentioning Molitor '637
The golf ball of claim 8 wherein said outer cover exhibits a Shore D hardness of about 64 or less.	<p>See above.</p> <p><u>Nesbitt</u>: Nesbitt teaches an outer cover layer made of Surlyn 1855 (now Surlyn 9020) that has a Shore D hardness of 55, <u>see</u> Exhibit I.</p> <p><u>Nesbitt</u>: "Reference is made to application Ser. No. 155,658 of Robert P. Molitor issued into U.S. Pat. No. 4,274,637 which describes a number of foamable compositions of a character which may be employed for ... layers ... 16 for the golf ball of this invention." (Nesbitt, col. 3, ll. 54-60.)</p> <p><u>Molitor '637</u>: In examples 16 and 17 teaches an outer layer made from a thermoplastic polyurethane identified as ESTANE 58133.</p> <p>ESTANE 58133 has a Shore D hardness of 55, <u>see</u> Exhibit J (ESTANE Thermoplastic Polyurethane Product Data Sheet)</p> <p>See also below for Shore D-hardness of 64 or less limitation explanation.</p>

As stated above, Nesbitt discloses its outer layer was made from SURLYN 1855 (now SURLYN 9020). This material had inherently flexural modulus of about 14,000 psi and a Shore hardness of 55, see Exhibit I "Typical Properties for Selected Grades of SURLYN". Moreover, as admitted by the inventor Sullivan of the '873 patent, golf ball designers knew that the mechanical properties of the materials used as a golf-ball cover layer were more critical to golf ball performance than the actual materials themselves, see Exhibit G at 334. Thus, because the actual chemical composition of the material is not critical to the practice of the invention with respect to its mechanical performance, i.e. its "click and feel" for a golfer, one of ordinary skill

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in the art at the time the invention was made would find it obvious to substitute one material for another material if both materials had substantially the same mechanical properties.

This rejection of claim 9 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 60: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 60: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 60: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 9 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #61.

The requester submits on page 67 that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

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Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 9	Proudfit
The golf ball of claim 8 wherein said outer cover exhibits a Shore D hardness of about 64 or less.	See above. "...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.

Proudfit discloses, teaches and suggests a three-piece golf ball (core, inner layer and outer layer) with the layers within the range of claimed thicknesses each layer made from a material having the mechanical properties substantially similar to the claimed mechanical properties. What Proudfit lacks in clearly disclosing are the particular mechanical and chemical properties of the claimed invention. However, Proudfit either incorporates by reference these mechanical and chemical properties and/or the materials used within the Proudfit golf ball inherently have these mechanical and chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of this invention. (Proudfit, col. 1, ll.39-43). The '981 patent discloses the preferably amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Pat, col. 3, ll. 59-60). If Proudfit discloses using blends SURLYN the chemical for making the inner cover and the '981 Patent is the formulation for ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and SURLYN 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid. As taught from Exhibit I, SURLYN 8940

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has a Shore D hardness of 65; SURLYN 9910 has a Shore D hardness of 64, see Exhibit I.

Therefore, this cover blend inherently has a hardness of 60 or more. Proudfit discloses the outer layer being a blend of balata. An example of the blend is disclosed in Table 7 reproduced below.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	3.00
Titanium Dioxide	17.00
Ultramarine Blue color	.30
Zinc DiAcrylate	35.00
Peroxide (Varox 220 XL)	2.50
Total	160.00

Note that Trans PolyIsoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore hardness of less than 64.

This rejection of claim 9 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 61: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 61: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

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Ground 61: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 9 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #62.

The requester submits on page 67 that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 9	Proudfit
The golf ball of claim 8 wherein said outer cover exhibits a Shore D hardness of about 64 or less.	See above. "...an outer layer of soft material such as balata or a blend of balata and other elastomers." (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.

Proudfit discloses, teaches and suggests a three-piece golf ball (core, inner layer and outer layer) with the layers within the range of claimed thicknesses each layer made from a

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material having the mechanical properties substantially similar to the claimed mechanical properties. What Proudfit lacks in clearly disclosing are the particular mechanical and chemical properties of the claimed invention. However, Proudfit either incorporates by reference these mechanical and chemical properties and/or the materials used within the Proudfit golf ball inherently have these mechanical and chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of this invention. (Proudfit, col. 1, ll.39-43). The '981 patent discloses the preferably amount of unsaturated carboxylic acid is "from about 5[%] to about 15% by weight." ('981 Pat, col. 3, ll. 59-60). If Proudfit discloses using blends SURLYN the chemical for making the inner cover and the '981 Patent is the formulation for ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and SURLYN 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid. As taught from Exhibit I, SURLYN 8940 has a Shore D hardness of 65; SURLYN 9910 has a Shore D hardness of 64, see Exhibit I. Therefore, this cover blend inherently has a hardness of 60 or more. Proudfit discloses the outer layer being a blend of balata. An example of the blend is disclosed in Table 7 reproduced below.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	1.00
Titanium Dioxide	17.00
Ultramarine Blue color	.50
Zinc DiAcrylate	35.00
Peroxide (Varox 230 XL)	2.50
Total	160.00

Note that Trans Polyisoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of

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Edmund A. Hebert, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore hardness of less than 64.

This rejection of claim 9 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 62: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 62: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 62: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 9 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #63.

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The requester submits on page 67 that claim 9 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 9	Proudfit
The golf ball of claim 8 wherein said outer cover exhibits a Shore D hardness of about 64 or less.	See above. “...an outer layer of soft material such as balata or a blend of balata and other elastomers.” (Proudfit, col. 5, ll. 15-17) This material inherently has a Shore D hardness of less than 64, see the reasoning below.

Proudfit discloses, teaches and suggests a three-piece golf ball (core, inner layer and outer layer) with the layers within the range of claimed thicknesses each layer made from a material having the mechanical properties substantially similar to the claimed mechanical properties. What Proudfit lacks in clearly disclosing are the particular mechanical and chemical properties of the claimed invention. However, Proudfit either incorporates by reference these mechanical and chemical properties and/or the materials used within the Proudfit golf ball inherently have these mechanical and chemical properties. For instance, Proudfit incorporates by reference U.S. Pat. No. 4,690,981 in the background of this invention. (Proudfit, col. 1, ll.39-43). The '981 patent discloses the preferably amount of unsaturated carboxylic acid is “from about 5[%] to about 15% by weight.” ('981 Pat, col. 3, ll. 59-60). If Proudfit discloses using blends SURLYN the chemical for making the inner cover and the '981 Patent is the formulation

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for ionomer known in the art as SURLYN, then inherently grades of SURLYN such as SURLYN 8940 and SURLYN 9910 would be low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid. As taught from Exhibit I, SURLYN 8940 has a Shore D hardness of 65; SURLYN 9910 has a Shore D hardness of 64, see Exhibit I. Therefore, this cover blend inherently has a hardness of 60 or more. Proudfit discloses the outer layer being a blend of balata. An example of the blend is disclosed in Table 7 reproduced below.

TABLE 7	
Composition of Outer Layer (Parts by Weight)	
Trans Polyisoprene (TP-301)	60.00
Polybutadiene	40.00
Zinc Oxide	5.00
Titanium Dioxide	17.00
Ultramarine Blue color	.50
Zinc DiAcrylate	35.00
Peroxide (Varon 230 XL)	2.50
Total	160.00

Note that Trans Polyisoprene is basically the chemical name for balata and Polybutadiene is one of the first types of synthetic rubber or elastomer. As described in the Rule 132 Declaration of Edmund A. Hebert, the outer cover layer disclosed in Proudfit is the outer cover layer for the golf ball disclosed in Exhibit A and that cover has a Shore D hardness of 52. Thus, Proudfit's outer layer cover inherently has a Shore hardness of less than 64.

In addition to Proudfit showing, Molitor '751 teaches that:

It has now been discovered that a key to manufacturing a two-piece ball having playability properties similar to wound, balata-covered balls is to provide about an inner resilient molded core a **cover having a shore C hardness less than 85**, preferably 70-80, and most preferably 72-76. The novel cover of the golf ball of the invention is made of a composition comprising a blend of (1) a **thermoplastic urethane having a shore A hardness less than 95** and (2) an ionomer having a shore D hardness greater than 55. The ionomer comprises olefinic groups having two to four carbon atoms copolymerized with acrylic or methacrylic acid groups and cross-linked with metal ions, preferably sodium or zinc ions. **The primary components of the blended cover are set at a weight ratio so as to result in a**

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cover material after molding having a shore C hardness within the range of 70 to 85, preferably 72 to 76. Preferably, the urethane component of the cover material has a tensile strength greater than 2500 psi and an elongation at break greater than 250%. A preferred cover material comprises about 8 parts of the thermoplastic urethane and between 1 and 4 parts ionomer. Preferably, the cover is no greater than 0.060 inch thick. Thinner covers appear to maximize the short iron playability characteristics of the balls.

(Molitor '751, col. 33-57 (emphasis added)). Thus, Molitor '751 teaches having a outer cover layer with a Shore C hardness less than 85 and preferably between 72 and 76. Moreover, Molitor '751 teaches what golf balls are included in the definition of "two-piece" ball within its instant specification.

The phrase "two-piece ball" as used herein refers primarily to balls consisting of a molded core and a cover, **but also includes balls having a separate solid layer beneath the cover as disclosed, for example, in U.S. Pat. No. 4,431,193 to Nesbitt, and other balls having non-wound cores.**

Molitor '751, col. 3, ll. 7-12 (emphasis added)). Proudfit, likewise, teaches the two-piece golf balls can fit within this definition.

FIG. 1 illustrates a two-piece golf ball 10 which includes a solid core 11 and a cover 12 which comprises a relatively hard inner layer 13 of one or more ionomer resins and a relatively soft outer layer 14 of polymeric material.

(Proudfit, col. 7, ll. 21-24).

As stated above, Molitor '751 teaches the cover of the golf ball has a Shore C hardness of less than 85, preferably 70-80, most preferably 72-76. As described in Molitor '751's TABLE bridging columns 7 and 8, Sample 8 constitutes one of the preferred embodiments and its cover is taught to have a Shore C hardness of 73. Patent Owner has admitted that a Shore C hardness of 73 is equal to a Shore D hardness of 47, see U.S. Pat. No. 6,905,648, Table 19 (Exhibit L). Thus, a cover having a Shore C hardness of between 72 and 76 will inherently have a Shore D hardness of less than 64.

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How one of ordinary skill in the art would discover this inherent mechanical property of Shore D hardness for the polyurethane material used in Molitor '751 is by "translating" a Shore C value to a Shore D value for the polyurethane material. How one of ordinary skill in the art "translates" a Shore C value to a Shore D value is by taking the known Shore hardness values with a given range, in this instance Shore C, for given materials, in this instance a polyurethane golf ball covers materials, and taking corresponding measurements with a different set of Shore gauges, in this instance Shore D (but could also be Shore A). A resulting trendline plot occurs from performing this procedure wherein the range of known Shore C values are the abscissa and the range of measured Shore D values are the ordinate. Then, said plot can be use to read equivalent Shore D value for any given Shore C value within the known range of Shore C. This is how one of ordinary skill in the art can know the equivalent Shore D or even Shore A hardness value for any given Shore C hardness value.

This rejection of claim 9 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 63: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 63: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

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Ground 63: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 9 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

Re. Claim 10

Proposed Third Party Requester Rejection: Ground #64.

The requester submits on pages 67-68 that claim 10 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Claim 10 is rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt (incorporating by reference Molitor '637).

Below is a claim chart identifying the claim limitations and where Nesbitt (incorporating by reference Molitor '637) discloses claim limitations.

Claim 10	Nesbitt (incorporating by reference Molitor '637)
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

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This rejection of claim 10 based on Nesbitt (incorporating by reference Molitor '637) was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 64: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 64: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

Ground 64: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #65.

In the alternative, the requester submits on page 68 that claim 10 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

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Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 10	Nesbitt
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

This rejection of claim 10 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 65: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 65: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 65: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 10 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

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Proposed Third Party Requester Rejection: Ground #66.

The requester submits on page 68 of the request that claim 10 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 10	Nesbitt
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

This rejection of claim 10 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 66: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 66: Third Party Requester's Comments

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Third Party Requester does not specifically counter argue this rejection.

Ground 66: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 10 under 35 USC 103(a) as being obvious by Nesbitt in view of Wu is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #67.

The requester submits on page 68 of the request that claim 10 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 10	Nesbitt
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.01 to about 0.05 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3. ll. 22-25.)

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This rejection of claim 10 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 67: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 67: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 67: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 10 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejections: Ground #68-70.

The requester submits on page 68 that claim 10 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637); Wu, U.S. Pat. No. 5,334,673 (Wu); or Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

These rejections are not adopted for the reasons given in below.

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Claim 10 requires the outer layer thickness to be in the range of about 0.01 to about 0.05 inches. Proudfit's preferred outer layer thickness embodiment is 0.0525 inches thick. See Proudfit, col. 7, ll. 40-46. Therefore, Proudfit's preferred embodiment is outside the claimed range. Further, the difference between Proudfit's preferred embodiment and the claimed invention's upper range limit is 0.0025 inches or twenty-five thousandths of an inch. This difference equates to approximately a factor of 4. The requester admits that it is not the chemical but mechanical properties of the materials used in making golf balls which is important to those skilled in the art. One of the mechanical properties in constructing a golf ball with materials is the thickness to make a given layer. For these reasons, one skilled in the art would not find obvious the claimed invention of claim when viewing Proudfit with Molitor '637, Wu or Molitor '751. Note that Molitor '637, Wu or Molitor '751 lack curing the deficiencies of Proudfit with respect to the instant claimed invention.

Re. Claim 11

Proposed Third Party Requester Rejection: Ground #71.

The requester submits on page 69 that claim 11 is unpatentable under 35 U.S.C. § 102(b) as being anticipated by Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt).

This rejection is adopted in this office action.

Claim 11 is rejected under 35 U.S.C. § 102(b) as being anticipated by Nesbitt (incorporating by reference Molitor '637).

Below is a claim chart identifying the claim limitations and where Nesbitt (incorporating by reference Molitor '637) discloses the claim limitations.

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Claim 11	Nesbitt (incorporating by reference Molitor '637)
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)

This rejection of claim 11 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 71: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 71: Third Party Requester's Comments

Third Party Requester's arguments for this claim are the same as given *supra* at "Ground 1: Third Party Requester's Comments."

Ground 71: Examiner's Response to the Argument and Comments

Upon review, the Examiner agrees with the arguments of the Third Party Requester and adopts this suggested rejection. See "Ground 1: Examiner's Response to the Argument and Comments," *supra*.

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Proposed Third Party Requester Rejection: Ground #72.

In the alternative, the requester submits on page 69 that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 11	Nesbitt
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surllyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)

This rejection of claim 11 based on Nesbitt in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 72: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 72: Third Party Requester's Comments

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Third Party Requester does not specifically counter argue this rejection.

Ground 72: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 11 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 2: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #73.

The requester submits on page 69 of the request that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Wu, as evidenced by Exhibit C.

Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 11	Nesbitt
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surllyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)

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This rejection of claim 11 based on Nesbitt in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 73: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 73: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 73: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 11 under 35 USC 103(a) as being obvious by Nesbitt in view of Molitor '637 is maintained. See "Ground 3: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #74.

The requester submits on page 69 of the request that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Nesbitt, U.S. Pat. No. 4,431,193 (Nesbitt) in view of Molitor et al., U.S. Patent No. 4,674,751 (Molitor '751).

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nesbitt mentioning Molitor '637 in view of Molitor '751.

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Below is a claim chart identifying the claim limitations and where Nesbitt discloses, teaches or suggests the claim limitations.

Claim 11	Nesbitt
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer or cover 16 of soft, low flexural modulus resin such and Surlyn type 1855, may be in the range of 0.020 inches and 0.100 inches." (Nesbitt, col. 3, ll. 22-25.) "The outer layer of the soft resin is of a thickness of 0.0575 inches." (Nesbitt, col. 3, ll. 39-40.)

This rejection of claim 11 based on Nesbitt in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 74: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 74: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 74: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 11 under 35 USC 103(a) as being obvious by Nesbitt in view of

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Molitor '751 is maintained. See "Ground 4: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #75.

The requester submits on page 70 that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al. U.S. Pat. No. 4,274,637 (Molitor '637).

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '637.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 11	Proudfit
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch ..." (Proudfit, col. 7, ll. 40-46.)

This rejection of claim 4 based on Proudfit in view of Molitor '637 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 75: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

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Ground 75: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 75: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 11 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '637 is maintained. See "Ground 5: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #76.

The requester submits on page 70 that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Wu, U.S. Pat. No. 5,334,673 (Wu).

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Wu.

Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 11	Proudfit
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch ..." (Proudfit, col. 7, ll. 40-46.)

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This rejection of claim 11 based on Proudfit in view of Wu was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 76: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 76: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 76: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 11 under 35 USC 103(a) as being obvious by Proudfit in view of Wu is maintained. See "Ground 6: Examiner's Response to the Argument and Comments," *supra*.

Proposed Third Party Requester Rejection: Ground #77.

The requester submits on page 70 that claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Proudfit, U.S. Pat. No. 5,314,187 (Proudfit) in view of Molitor et al., U.S. Pat. No. 4,674,751 (Molitor '751).

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Proudfit in view of Molitor '751.

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Below is a claim chart identifying the claim limitations and where Proudfit discloses, teaches or suggests the claim limitations.

Claim 11	Proudfit
The golf ball of claim 8 wherein said outer cover layer has a thickness of from about 0.03 to about 0.06 inches.	See above. "The thickness of the outer layer can be within the range of about 0.0450 to 0.0650 inch to provide a total ball diameter of 1.680 inch. The preferred dimensions are ... an outer layer thickness of 0.0525 inch ..." (Proudfit, col. 7, ll. 40-46.)

This rejection of claim 11 based on Proudfit in view of Molitor '751 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Ground 77: Patent Owner's Argument

Patent Owner does not specifically argue this rejection.

Ground 77: Third Party Requester's Comments

Third Party Requester does not specifically counter argue this rejection.

Ground 77: Examiner's Response to the Argument and Comments

Examiner agrees with the general comments of the Third Party Requester, and the rejection of claim 11 under 35 USC 103(a) as being obvious by Proudfit in view of Molitor '751 is maintained. See "Ground 7: Examiner's Response to the Argument and Comments," *supra*.

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Unexpected Results and Commercial Success

Patent Owner's Argument

Besides arguing the outstanding rejections of individual claims as explained *supra*, the Patent Owner argues generally for non-obviousness of the invention based on unexpected results and commercial success (*see* Patent Owner's Response at pages 6-9). The crux of the argument is that, although the instant invention is made of individual elements known in the art, the unique combination of elements of the claimed invention results in a golf ball with excellent ""distance"" and ""feel"" (Patent Owner's Response at page 7). Consequently, golf balls within the ambit of the claimed invention (*i.e.*, the Rule 35 ball of the Patent Owner and the Pro V1 of the Third Party Requester) have great commercial success. Hence, the "[u]nexpected and overwhelming success of Mr. Sullivan's golf ball technology thus demonstrates that his invention was not simply the predictable result of combining known materials, but in fact represented the best solution even conceived for the distance-versus-control problem" (Patent Owner's Response at page 9).

Third Party Requester's Comments

The Third Party Requester comments that: (1) the Sullivan '103 patent does not disclose or suggest the Pro V1 because the Pro V1 has a construction different in several aspects (*e.g.*, core size) from the ball disclosed in the Sullivan '130 patent (Third Party Requester's Comments at page 35 to middle of page 37); (2) there is no nexus between the commercial success of the Third Party Requester's Pro V1 and the Sullivan '130 patent because the Pro V1's success rests

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upon specific types of advertising (Third Party Requester's Comments at middle of page 37 to middle of page 40) along with different technology (Third Party Requester's Comments at middle of page 40 to page 43); (3) many golf balls purport to have solved the distance and "feel" problem (Third Party Requester's Comments at bottom of page 43 top of page 45); and, (4) even though there were other three-piece, polyurethane balls available, there was little demand for the ball on the PGA tour until shortly before the introduction of the Pro V1 (Third Party Requester's Comments at page 45 to page 46).

Examiner's Response to the Argument and Comments

Examiner generally agrees with the comments of the Third Party Requester and finds the arguments of the Patent Owner of unexpected results and commercial success to be unpersuasive.

As a preliminary matter, the argument(s) presented for secondary considerations presented by the Patent Owner are not relevant to the rejections made under 35 USC 102 (*see* MPEP 2131.04). Thus only the rejections under 35 USC 103 are considered.

To show unexpected results (*i.e.*, unique and excellent combination of distance and "feel") the Patent Owner uses testimonial-type evidence of statements, or endorsements, by well known golfers such as Arnold Palmer (Patent Owner's Response at bottom on page 8).

Examiner considers this to be opinion evidence because the statements are not accompanied by objective data. Due to this lack of objective data, the probative value of the presented opinion evidence is not sufficient to overcome the *prima facie* rejections, *supra*, maintained in this office action.

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The evidence of commercial success proffered by the Patent Owner is similarly testimonial in nature (*e.g.*, "Pro V1 is the "most successful golf ball in the history of the golf industry . . ."" citing an article in the Golf Gazette). Again no objective data is presented as support. With no objective data, the probative value of the presented evidence is again not sufficient to overcome the *prima facie* rejections, *supra*, maintained in this office action.

As to the comments of the Third Party Requester concerning, *inter alia*, the scope of the claims of the Sullivan '130 patent and its nexus with the Pro V1, the Examiner did not evaluate these comments since the secondary considerations presented by the Patent Owner were not found sufficient for the reasons given immediately above.

Shore D hardness value measured on the ball

Patent Owner's Argument

Besides arguing the outstanding rejections of individual claims as explained *supra* and commercial success *id.*, the Patent Owner argues that the claims in the instant patent require the Shore D hardness value's of the cover layers to be measured "on the ball" (Patent Owner's Response at pages 10-12). Since the two base references (Nesbitt and Proudfit) do not disclose measuring hardness "on the ball" for their covers, the outstanding rejections are flawed (Patent Owner's Response at pages 12-13).

Third Party Requester's Comments

The Third Party Requester comments that: (1) in a reexamination claims are given their broadest reasonable interpretation consistent with the specification, and, here, "on the ball" is too

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narrow a construction (Third Party Requester's Comments at page 7); (2) the specification of the instant patent clearly states at col. 16, lines 15-16, that "Shore hardness was measured in accordance with ASTM test 2240" which calls for "off the ball" testing (Third Party Requester's Comments at page 8); (3) the Patent Owner knew how to claim "on the ball" because in a sister patent the language of "as measured on the curved surface thereof" is explicitly used (Third Party Requester's Comments at bottom of page 9 to middle of page 10); and, (4) even if measured "on the ball" the prior art is still good because measuring Shore D hardness "on the ball" does not affect the disclosed values enough to make the instant patent's claims patentable over the prior art (Third Party Requester's Comments at bottom of page 10 to page 12).

Examiner's Response to the Argument and Comments

Examiner generally agrees with the comments of the Third Party Requester and finds the arguments of the Patent Owner concerning measuring of hardness "on the ball" in the claim language to be unpersuasive.

The rule is that "[d]uring reexamination claims are given the broadest reasonable interpretation consistent with the specification" (MPEP 2658(I) and 2258(I)(G)). Here, the claims are silent as to whether the Shore D hardness value is measured "on the ball" or not. In the specification, hardness measurements are disclosed at col. 7, lines 20-22, and col. 14, lines 49-50, and are to be conducted "in accordance with ASTM method D-2240." ASTM D-2240's method of testing uses a specimen of material, and are not measured "on the ball" (Exhibit C). However, in the examples section of the specification there is language that appears to support an interpretation of hardness values measured "on the ball." An example of the language is

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"properties of the finished balls are set forth below" at col. 22, lines 65-68. Also, hardness values in the tables for layered golf balls are not consistent with the hardness values of the constituent resins that make up that layer (for example, Patent Owner's discussion of Iotek 959 and Iotek 960 starting at the bottom of page 10 of the Response).

The specification, then, appears ambiguous as to the interpretation of the claim language. However, the Federal Circuit has held that "a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment (MPEP 2111.01(II) citing *Superguide Corp. v. DirecTV Enterprises, Inc.*). Further, the Fed. Cir. has stated that "[t]he problem is to interpret claims 'in view of the specification' without unnecessarily importing limitations from the specification into the claim" (MPEP 2111.01(II) citing *E-Pass Techs., Inc. v. 3Com Corp.*).

Since there is ambiguity in the specification as to how hardness values are measured and mindful of not reading limitations into the claim language, the Examiner considers the broadest reasonable interpretation of this claim language to not require the hardness values to be measured "on the ball."

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Correspondence

All correspondence relating to this *inter partes* reexamination proceeding should be directed as follows:

By U.S. Postal Service Mail to:

Mail Stop *Inter Partes* Reexam
ATTN: Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By hand to: Customer Service Window
ATTN: Central Reexamination Unit
Randolph Building
401 Dulany St.
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Signed:

____/Jeffrey L. Gellner/____
Jeffrey L. Gellner
CRU Examiner
GAU 3993

conferees: /DOR/

A handwritten signature, possibly reading 'AK', is written below the 'conferees' line.